Preparing for a Changing Climate
Perceptions of BC Public Service Employees

June, 2012

BCStats

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FOREWARD

Scientists increasingly recognize that even with ambitious actions to reduce greenhouse gases, the atmosphere will continue to warm for centuries and it will still be necessary to prepare for and adjust to the effects of climate change (commonly referred to as adaptation). A recent international assessment of climate related disasters indicates that it is likely that the frequency of heavy precipitation will increase in the 21st century over many regions; and it is virtually certain that increases in the frequency of warm daily temperature extremes and decreases in cold extremes will occur throughout the 21st century on a global scale[1]. Another recent study, by the National Roundtable on the Environment and the Economy (NRTEE), found that B.C.'s economy could be greatly affected by climate change impacts on its timber supply and coastline. The NRTEE estimates that 3,000 to 12,000 B.C. homes could be at risk of coastal flooding due to climate change by mid-century. The economic damages from existing flooding risks and climate change-related risks could translate into an annual per capita cost of $565-$2,146 in B.C. by the 2050s[2].

During the decades to come, B.C. can expect long-term warming to continue, changes in the frequency and intensity of extreme weather events (such as heat waves and extreme precipitation), rising sea levels, summer water scarcity, and changes in the range and distribution of species and ecosystems. Changing weather patterns will affect B.C. in many ways – the amount of water available for household and other uses at different times of year, the costs of maintaining our infrastructure, and keeping our communities safe from extreme weather. Although we can continue to adjust to these climate changes after the fact, in many cases it will be more cost-effective and will minimize social impacts to prepare ahead of time.

The Government of B.C. is beginning to prepare for these impacts. In 2010, the provincial government released *Preparing for Climate Change: British Columbia's Adaptation Strategy*. The Strategy outlines deliverables in three areas: providing the knowledge foundation necessary to support action across the economy; demonstrating leadership by taking action within government; and working with strategic partners to advance adaptation in specific climate sensitive sectors. The Strategy emphasizes government's commitment to integrate adaptation into its own planning, legislation, regulations, programs, and decisions, where relevant.

In 2011, the Climate Action Secretariat commissioned BC Stats to conduct an online survey of B.C. Public Service employees to: establish a baseline of organizational awareness; determine the current level of implementation on adaptation; and gain insights into the key issues related to climate change adaptation for public service employees. The findings of the survey provide useful information to help frame future initiatives and to understand the needs of the various constituencies within the Public Sector with respect to planning for a changing climate. The following report is written by BC Stats and includes discussion on methodology and a detailed analysis of the survey results.

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[1] IPCC. (2012) *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change* [Field, C.B., V. Barros, T.F. Stocker,D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, UK, and New York, NY, USA, 582 pp.

[2] National Round Table on the Environment and the Economy. (2011). *Paying the Prince: The Economic Impacts of Climate Change for Canada*.

B.C. must prepare for and adjust to a changing climate

Respondents overwhelmingly believe that preparing for climate change is an important part of climate action. The majority of respondents agreed that the impacts of climate change are currently being felt around the world (92%), that climate change has already impacted B.C. (83%), and that B.C. will also have to prepare for and adjust to the impacts of climate change (85%).

When asked whether B.C. is well prepared for any threats related to climate change, 45% disagreed; however 26% neither disagreed nor agreed and 23% answered don't know suggesting that many may be unsure about B.C.'s level of preparedness for a changing climate.

B.C. Public Servants recognize that there are risks to their business areas

Climate change will affect our natural systems, public health and safety, infrastructure, and economic sustainability. Over 80% of respondents from all ministries could identify at least one climate-related threat to their business area.

Respondents also stated that their business area works with clients and stakeholders who may be vulnerable to extreme weather and long-term changes in climate (65%). These results suggest that the work the B.C. Public Service does may have to address these vulnerabilities. For example, climate change impacts may affect the types and levels of services provided to deal with these new or increased vulnerabilities (e.g. emergency management and preparedness), and the objectives that the Public Service are collectively working toward (e.g. economic development).

Planning will have to consider changing risks and opportunities

Responses on whether climate change would present opportunities to B.C. were mixed. Nearly 50% of respondents answered "don't know" when asked whether there are any long-term changes in climate that would provide opportunities for their business area, clients, or stakeholders. Respondents from Ministries of Environment, Forest Lands and Natural Resource Operations (FLNRO), Science and Technical Officers, and those in Business and Strategic Leadership were more likely to perceive opportunities.

Climate change may change the timing, magnitude, and types of risks that we currently manage. While some risks may be aggravated by climate change, some areas may see other risks alleviated; for instance, the likelihood of extreme cold events may diminish. An understanding of how risks and opportunities might change will be important in order to target resources appropriately. This understanding will also need to be integrated into business areas' risks management and planning, where relevant. For example, FLNRO is preparing new guidelines for seed transfer activities that will help forest managers identify and plant trees that will be suitable for a changing climate.

Progress across government is uneven

The level and type of planning and preparation required will depend largely on the exposure of the business area; whether it is responding to direct risks to its core operations, or indirectly such as through climate-related risks affecting vulnerable clients. Climate change may not be relevant to all areas of the B.C. Government's business. Assessing its relevance is an important first step in understanding whether adaptation needs to be integrated into policies, programs and planning.

Although a majority of respondents believe that climate change may pose threats to the work of the B.C. Public Service, work on climate change adaptation remains uneven across ministries. Less than half of all

respondents (39%) report that their business area is integrating, assessing or has begun considering the relevance of extreme weather events and long-term changes in climate in their work.
Of those who reported that their business area had not thought about the relevance of extreme weather events or long-term changes in climate, nearly half (49%) indicated that it could be relevant to the work they do. The results highlight the importance of information that translates climate change and its associated impacts to the work the B.C. Public Service does, and assessment tools targeted to users' needs to assist staff in understanding the relevance of climate change to the work they do.

Natural resource ministries are showing leadership and are integrating climate change into their work

The natural resource ministries, in particular Environment and FLNRO were the least likely to answer "don't know" or to have reported that they have not thought about their business area's current position regarding the relevance of climate change to their business area. These two ministries were also the most likely to report that they were integrating these events and changes into the work they do (33% and 32% respectively). A large portion of respondents from both Transportation and Infrastructure (29%) and the Other Resources Group[3] (25%) also indicated that they are integrating it into the work they do. Respondents from the Ministries of Environment, FLNRO, and Transportation and Infrastructure are more likely to report that this type of planning is a moderate or significant priority (53%, 55% and 75% respectively).

Examples of Adaptation Planning and Action

The Ministry of Transportation and Infrastructure has assessed potential impacts on two key sections of highway; and is considering climate change impacts in the design and cost of highway rehabilitation, and when improving highways safety and reliability.

To help coastal communities prepare for sea level rise, the provincial government has released new guidelines for the construction of protective sea dikes.

The new Forest Stewardship Action Plan for Climate Change Adaptation describes how FLNRO plans to adjust its policies, operations, and decision-support tools to keep forests healthy and productive in the face of climate change.

Respondents in Science and Technical Officer job classifications were also more likely than those in many other job classifications to report that they are integrating these events and changes into their work. Over 60% of respondents in Science and Technical Officer job classification indicate that planning for extreme weather events and long-term changes in climate is a moderate or significant priority for their business area. Not surprisingly, 97% of Science and Technical Officers work in Environment, FLNRO, Transportation and Infrastructure, or the Other Resources group.

Direct experience of extreme weather has motivated action

Respondents with experience in the past twelve months dealing with a recent extreme weather event were more likely to state that their business area takes extreme weather events and long-term changes in climate into account (70% to 40% depending on the type of activity compared to 58% to 27%). Furthermore, respondents recent extreme weather experience were almost 20 percentage points more likely than those who had not had this recent experience to report that planning for extreme weather events or long-term changes in climate is a priority for their business.

Generally, respondents from Vancouver Island (77%) and the South Coast (85%) were less likely than those from the Southern Interior (92%) and Northern region (93%) to perceive the events or changes as

[3] Due to the small sample size for some ministries, those with less than 100 respondents were aggregated into groups. The "Other Resources" Group consists of the Ministry of Agriculture, Ministry of Energy and Mines, and the Ministry of Aboriginal Relations and Reconciliation.

threats. Respondents from Northern B.C. were most likely to report having been affected by a weather-related event in the past twelve months (53%), compared to their colleagues in the Southern Interior (39.7%), South Coast (27%) and Vancouver Island (23%). These differences may be partially attributed to the nature of work in the various regions, as well as the nature and recent occurrences of extreme weather events across the province.

Public Servants need information relevant to their business areas

Almost half (49%) of all respondents indicated that it is not clear to them how climate change will affect their work. Other important barriers to adaptation include: that climate change may not be an organizational priority (42%); a lack of experience identifying and assessing the potential impacts of climate change (42%); and a lack of information about climate change and its potential impacts (42%). When asked what kinds of tools or resources would be helpful, 65% of respondents indicated that information about how climate change is relevant to their business area to be useful or very useful, followed by case studies outlining what others have done to prepare for climate change impacts (53%), and general information about the effects of climate change in B.C. (53%).

Several resources and tools that can address these needs have been developed though successful partnerships. For example, the Pacific Climate Impacts Consortium's Plan2Adapt tool helps users assess regional climate change through easy to interpret maps, graphs and data tables. The Pacific Institute for Climate Solutions is designing *Climate Insights 101, a series of online* courses on climate change science, impacts, and action. The first module, on climate change science, is available online to all of B.C.'s civil servants. These and other similar initiatives provide important support to government and other decision makers on identifying vulnerabilities, evaluating adaptation options and implementing adaptation actions.

Climate Action Secretariat, B.C. Ministry of Environment

BRITISH COLUMBIA LiveSmart BC

EXECUTIVE SUMMARY

In 2012, the *Climate Action Secretariat* commissioned a web survey of BC Public Service employees to establish a baseline of organizational awareness, understanding and motivations in relation to climate change adaptation. Nearly 3,000 respondents from all 19 ministries responded. The survey gathered information about respondents understanding of climate change; potential climate change impacts to their business area; business areas policies and activities relating to impacts and adaptation; attitudes and barriers; and needed information and support. This report outlines the findings of that research.

Most Believe Climate Change is a Threat to BC

The majority of respondents disagree (74%) that reducing greenhouse gases (i.e. mitigation) is all that is needed to avoid future climate change impacts. The majority of respondents agree that BC will have to prepare for and adjust to the impacts of climate change (85%) and that climate change impacts will pose future threats to BC (81%).

When asked about specific threats, over 80% indicate that their business area is threatened by one or more extreme weather events or long-term changes in climate. Nearly two-thirds (65%) of respondents also stated that they work with clients or stakeholders that may be vulnerable to extreme weather events and long-term changes in climate.

Only Some Are Starting to Plan for Climate Change Impacts

Although the vast majority of respondents agree that their business area may be affected by extreme weather and long-term changes in climate, and many respondents felt that their clients and stakeholders may be vulnerable to extreme weather and long-term changes in climate, less than half of all respondents (39%) report that their business area is integrating, assessing, or has begun considering the relevance of extreme weather events and long-term changes in climate in their work. Over half of respondents indicate that either they do not know their business area's current position (27%), or that they believe their business area has not begun considering the relevance of extreme weather events or long-term changes to climate (35%). Of those who reported that their business area had not thought about the relevance of extreme weather events or long-term changes in climate, nearly half (49%) of these respondents indicated that while they have not thought about it they agree it could be relevant to the work they do.

Respondents from resources ministries including the Environment and Forests, Lands and Natural Resources Operations are most likely to report that planning for extreme weather event and long-term changes in climate is both being integrated into their work and is a moderate or significant priority for their business area.

The integration of planning for extreme weather events and long-term changes in climate into business area activities varies by activity. Of those who reported that their business area had begun thinking about, assessing or integrating extreme weather events or long-term changes in climate into their work, 65% (the largest proportion) indicated that they take these events and changes into account when engaging in risk management planning and 34% (the smallest proportion) reported taking these events and changes into account when drafting or amending legislation and regulations or financing projects carried out by other organizations.

Lack of Knowledge is a Challenge

Knowledge about climate change, potential impacts to business areas, and the level of planning for climate change impacts varies across the BC Public Service. Throughout the survey a significant proportion of respondents answered "don't know" to various questions about how their business area is preparing for climate change impacts. In particular:

- 23% did not know if B.C. is well prepared for any threats related to climate change,
- 27% did not know their business area's current position regarding the relevance of extreme weather events or long-term changes in climate,
- 18% did not know the extent to which planning for extreme weather events or long-term changes in climate was a priority.

When asked if there business area takes extreme weather events or long-term changes in climate into account when drafting or amending legislation and regulations or when financing projects carried out by other organizations a larger proportion of respondents answered "don't know" than agreed (28% and 35% respectively). Over 25% did not know whether extreme weather events or long-term changes in climate were taken into account in particular business activities such as reviewing or approving activities carried out by other individuals or organizations (26%), in the design and building of infrastructure (27%), when drafting or amending legislation and regulations (28%) and when financing projects carried out by other organizations (35%).

In terms of BC Public Service strategy, over 85% are unfamiliar with either the BC Government's Climate Change Adaptation Strategy or the "Climate Change 101" courses.

Employees Want Information About How Climate Change is Relevant to Their Business Area

When asked about the attitudes and barriers when it comes to preparing for climate change in their business area, nearly 50% of respondents agreed that it was not clear to them how climate change would affect their work, preparing for climate change was not an organizational priority, there was not enough information about climate change and its potential impacts, or their business area did not have the expertise required to identify and assess the potential impact of climate change.

Respondents indicated that that there are many useful tools or resources that could benefit them in assessing and preparing for climate change. The most useful tool or resource identified was information about how climate change is relevant to their business area (71% indicated that this was either useful or very useful).

INTRODUCTION

In addition to working to reduce greenhouse gas emissions, the BC Ministry of Environment Climate Action Secretariat (CAS) is helping British Columbia prepare for and adapt to the unavoidable impacts of climate change. CAS works directly with provincial ministries and agencies to help them consider climate change as they protect the health and safety of residents, maintain public infrastructure, manage natural resources and achieve environmental, social and economic sustainability.

The *Preparing for Climate Change: British Columbia's Adaptation Strategy* directs government to consider climate change and its impacts, where relevant, in planning, projects, policies, legislation, regulations and approvals. CAS is leading and coordinating B.C.'s Adaptation Strategy, and is also providing high-level, strategic oversight on adaptation in British Columbia.

Between January 24th and February 10th 2012, BC Stats administered a survey on behalf of CAS to 5,999 BC Public Service (BCPS) employees and 2,981 individuals from all 19 ministries responded. The purpose of this survey was to:

- Establish a baseline of organizational awareness, understanding and motivations in relation to climate change adaptation;
- Determine the current level of implementation on adaptation in decision making and barriers to implementation; and
- Gain insights into key issues related to climate change adaptation for Ministries and public service employees.

More detailed methodology information can be found in Appendix A: Methodology.

BC Stats and CAS employed a collaborative process to design the *2012 Preparing for a Changing Climate survey* over a two month period in the fall of 2011. The final survey instrument was a product of consultation with experts in survey design and climate change.

A small pilot survey was administered one month before the official launch with a sample of respondents including those who work in the area of climate change and adaptation and those who do not. Pilot respondents answered the questions within the survey and were also given opportunities to comment on their comprehension of terms and ability to answer the questions based on their day-to-day work in the BCPS.

The final web survey provided respondents with six definitions that were relevant to the questions. These definitions were provided at the beginning of the web survey, and throughout the survey respondents were able to hover over the text with their mouse to see the definitions. Table 1 shows the survey definitions as they were presented to the respondents.

Table 1: Survey Definitions

Climate change impacts refer to the effects of climate change on natural or human systems.

Extreme weather events refer to weather occurrences that are notable, rare or unique, or otherwise significant in their impacts, effects or outcomes. Extreme events tend to refer to such extremes as heat waves, storms, floods and droughts.

Long-term changes in climate refer to the long-term average of weather, such as an increase in the average atmospheric temperature.

Your business area refers to you and the people in your work unit who do similar work, have similar projects and have similar types of clients and/or stakeholders as you.

Threat refers to external elements in the environment that could negatively impact a project, program or business. For example events or circumstances that would jeopardize a projects' timeline, budget, or success.

The final questionnaire included 59 questions and was divided into five sections:

1. Understanding Climate Change
2. Potential Impacts to Business Area
3. Business Area Policies and Activities
4. Attitudes and Barriers
5. Information and Support

See Appendix B for copies of the invitation email, reminder email and the final questionnaire.

ABOUT THIS REPORT

Interpreting the Results

Respondents were asked to indicate their level of agreement with a series of general statements about climate change on a scale where:

- 1 is "strongly disagree",
- 2 is "disagree",
- 3 is "neither disagree nor agree"
- 4 is "agree"
- 5 is "strongly agree", and
- Respondents were also provided the option to mark "don't know".

For analysis throughout this report the responses have been collapsed into four categories:

- don't know
- disagree (strongly disagree or disagree)
- neither disagree or agree
- agree (strongly agree or agree)

The Difference between "Neither Disagree nor Agree" and "Don't Know"

The differences between the response categories "neither disagree nor agree" and "don't know" are complicated to interpret. Both are considered non-polar in that they do not express a positive or a negative opinion. However, "don't know" can be interpreted as 'opting out' of answering the question, which could be an indication that the respondent does not understand the question or have enough information to respond confidently while "neither disagree nor agree" lends itself to a more neutral interpretation in a web survey it falls visually between the positive and negative ends of the spectrum.

Ministry Groupings

The distribution of responses from each ministry is a result of both population proportionate sampling and varying response rates by ministry[4]. Due to the small sample size for some individual ministries, those with less than 100 respondents were aggregated into three groupings; "Service & Economy" which includes the Public Service Agency, the Premier's Office and the Ministry of Jobs, Tourism & Innovation; "Other Resources" which includes the small resource sector ministries including the Ministry of Agriculture, the Ministry of Energy & Mines, and the Ministry of Aboriginal Relations & Reconciliation; and finally, "Education & Culture" which includes the Ministry of Advanced Education, the Ministry of Education and the Ministry of Community, Sport & Cultural Development. Throughout the report, acronyms and group names will be used to describe the ministries. Despite the groupings to ensure adequate sample sizes, ministries or groupings with fewer than 300 respondents have large margins of error and, as a result, most differences between ministries should be interpreted with caution. The ministries and groupings are shown with their respective acronyms and sample sizes in Table 1. Detailed results by Ministry can be found in Appendix C: Tables.

[4] The response rate by ministry varied from 42% in Attorney General to 64% in Energy & Mines.

Table 2: Ministries

Ministry Name[5]	Acronym or Group Name	Group Sample Size	Ministry Response Rate
Forests, Lands, & Natural Resource Operations	FLNRO	465	59%
Children & Family Development	CFD	441	44%
Public Safety & Solicitor General	PSSG	309	47%
Attorney General	AG	302	42%
Labour, Citizens Services & Open Government	LCO	276	55%
Social Development	SD	266	55%
Transportation & Infrastructure	TI	188	59%
Health	Health	147	51%
Finance	Finance	135	56%
Environment	Environment	124	60%
Public Service Agency (n=60)	Service & Economy group	120	63%
Premiers' Office (n=8)			44%
Jobs, Tourism & Innovation (n=52)			48%
Agriculture (n=32)	Other Resources group	106	46%
Energy & Mines (n=49)			65%
Aboriginal Relations & Reconciliation (n=25)			51%
Advanced Education (n=27)	Education & Culture group	102	50%
Education (n=42)			63%
Community, Sport & Cultural Development (n=33)			62%
Total, BC Public Service		**2981**	51%

Job Classification Groupings

Respondents were also grouped into job classifications based on their job descriptions and titles. One group of particular interest, Strategic Leadership & Executives, had a small number of respondents (75) and has been combined with Business Leadership for the purpose of analysis (referred to within this report as Business & Strategic Leadership). Caution should be used when interpreting differences between groups with fewer than 300 respondents. Two groups, Legal Counsel and Trades & Operations are excluded from any job classification analysis because of sample sizes under 100. Table 3 shows the job classifications that have been used for analysis, examples of job titles, and the sample size for each grouping. Detailed results by Job Classification can be found in Appendix C: Tables.

[5] Ministry names are current for December 2011. Any subsequent reorganizations or changes are not accounted for in this analysis.

Table 3: Job Classification

Job Classification	Examples of Job Titles	Sample Size	Job Classification Response Rate
Administrative Support	Administrative Coordinator Clerk Clerk Stenographer Office Assistant	605	52%
Health, Education & Social Work	Child Care Counsellor Community Program Officer (EAW) Education Officer Licensed Psychologist Nurse Nutritionist Social Program Officer (CYMH) R27	444	44%
Senior Administration & Research	Administrative Officer Communications Officer Executive Administrative Assistant Planning Officer Policy Analyst Research Officer Senior Executive Assistant	436	61%
Science & Technical Officers	Biologist Laboratory/Health Science Officer Licensed Scientific Officer Scientific/Technical Officer	435	61%
Business & Strategic Leadership	ADM Senior Executive Strategic Leadership Business Leadership	388	53%
Corrections & Enforcement	Commercial Transport Inspector Conservation Officer Correctional Services Deputy Sheriff Probation Interviewer Tech Enforcement Officer	180	34%
Information Technology	Information Systems	145	55%
Applied Leadership	Applied Leadership	140	54%
Finance & Economics	Economist Financial Officer	119	58%
Legal Counsel	Legal Counsel Paralegal	74	40%
Trades & Operations	Control Tower Operator Food Production Services	15	44%
Total, BC Public Service		**2981**	**51%**

A Note about the Relationship between Ministry and Job Classification

Throughout the report, when examining the data by ministry and job classification it is important to note that there is a strong relationship between these two variables; certain job classifications tend to be prevalent within particular ministries:

- 63% of respondents in Science & Technical Officers positions work in FLNRO
- 57% of respondents in Enforcement & Corrections positions work in PSSG
- 55% of respondents in Health, Education & Social Work positions work in CFD
- 41% of respondents in Information Technology positions work in LCO
- 38% of respondents in Finance & Economics positions work in Finance.

Regions

Four regions are analyzed throughout the report when relevant: Northern BC, South Coast, Southern Interior and Vancouver Island. Vancouver Island has the largest number of respondents in the survey sample (1403) due to the large number of BCPS offices in Victoria. The sample sizes for all regions are sufficient to produce accurate data with small margins of error. The regional categories are shown in Table 4.

Table 4: Regions

Region	Sample size
Northern BC	360
South Coast	778
Southern Interior	408
Vancouver Island	1403
Unknown[6]	32
Total, BC Public Service	**2981**

[6] Those respondents whose region was unknown were excluded from any regional analysis throughout the report.

RESULTS

Perceptions about Climate Change

Respondents were asked to indicate their level of agreement with a series of statements about climate change. As shown in Figure 1, agreement ranged from 81% to 92% with the following statements:

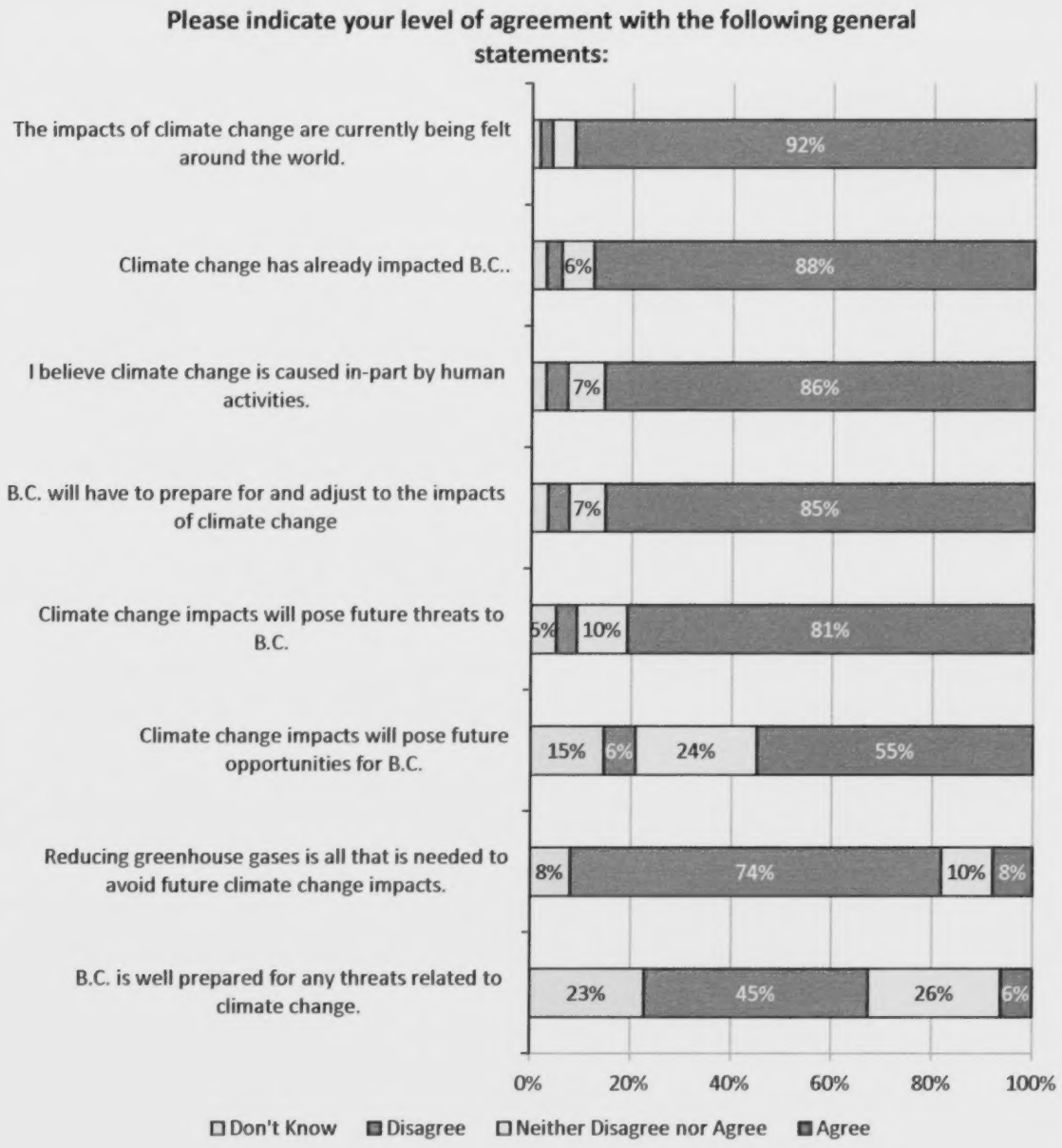
- Climate change impacts are currently being felt around the world.
- Climate change has already impacted B.C.
- Climate change impacts will pose future threats to B.C.
- B.C. is well prepared for any threats related to climate change.
- B.C. will have to prepare for and adjust to the impacts of climate change.
- Reducing greenhouse gases is all that is needed to avoid future climate change impacts.
- I believe climate change is caused in-part by human activities.

Only 55% of respondents agreed that "Climate change impacts will pose future opportunities for BC", while nearly 40% provided a neutral response (24% neither disagreed nor agree and 15% answered don't know).

Nearly three-quarters of respondents (74%) disagreed with the statement "Reducing greenhouse gases is all that is needed to avoid future climate change impacts" with the remaining respondents split almost evenly between agree, neither disagree nor agree, and don't know.

When asked to respond to the statement, "BC is well prepared for any threats related to climate change", 45% disagreed; however 26% neither disagreed nor agreed and 23% answered don't know suggesting that many may be unsure about B.C.'s level of preparedness for a changing climate.

Figure 1: General Statements about Climate Change



Perceptions by Ministry

There were no statistically significant differences in perceptions about climate change between ministries, yet there are some interesting trends. In general, respondents from AG, Finance, PSSG, TI as well as those grouped within the Other Resources group had lower than average levels of agreement with the following statements:

- The impacts of climate change are currently being felt around the world.
- Climate change has already impacted B.C.
- I believe climate change is caused in-part by human activities.
- B.C. will have to prepare for and adjust to the impacts of climate change.
- Climate change impacts will pose future threats to B.C.

CFD, Environment, SD, and the two other ministry groupings (Education & Culture and Service & Economy) had higher than average agreement with those same statements. Meanwhile, the remaining ministries (FLNRO, Health and LCO) had mixed levels of agreement with the various statements.

When asked to indicate their level of agreement with the statement "Climate change impacts will pose future opportunities for B.C.", respondents from Environment, FLNRO, LCO, SD, Education & Culture, Service & Economy and the Other Resources groups were more likely than respondents from the remaining ministries to agree.

For the two statements "BC is well prepared for any threats related to climate change" and "Reducing greenhouse gases is all that is needed to avoid future climate change impacts", more respondents disagreed than agreed. Responses from Environment stand out as noteworthy. Respondents from Environment were significantly[7] more likely than those from AG, Finance, Health, LCO, TI, and the BCPS in general, to disagree that "BC is well prepared for any threats related to climate change". For the statement, "Reducing greenhouse gases is all that is needed to avoid future climate change impacts", respondents from Environment were significantly more likely to disagree than those from AG, CFD, Health, and TI.

[7] Throughout the report, the term "significant" refers to statistical significance at the 95% confidence level. Non-significant findings that are reported are noted as being not statistically significant.

Perceptions by Job Classification

There were a few notable differences in perceptions about climate change between respondents within different job classifications. Generally, those in Applied Leadership, Health, Education & Social Work, and Senior Administration & Research had higher than average levels of agreement with statements about climate change and its impacts. Meanwhile only respondents in Enforcement & Corrections positions had consistently lower than average levels of agreement.

Some particularly noteworthy differences include a significant 14 percentage point difference in agreement between respondents from Health, Education & Social Work and those from Enforcement & Corrections positions for the statement, "I believe climate change is caused in-part by human activities." Respondents in Enforcement & Corrections positions were significantly different, with just 76% agreeing with the statement, compared to 86% agreement on average for the BCPS. For the statement, "Climate change impacts will pose future opportunities for B.C." respondents in the Business & Strategic Leadership grouping showed significantly higher levels of agreement (62% agreement compared to 55%) than the average BC Public Service employee.

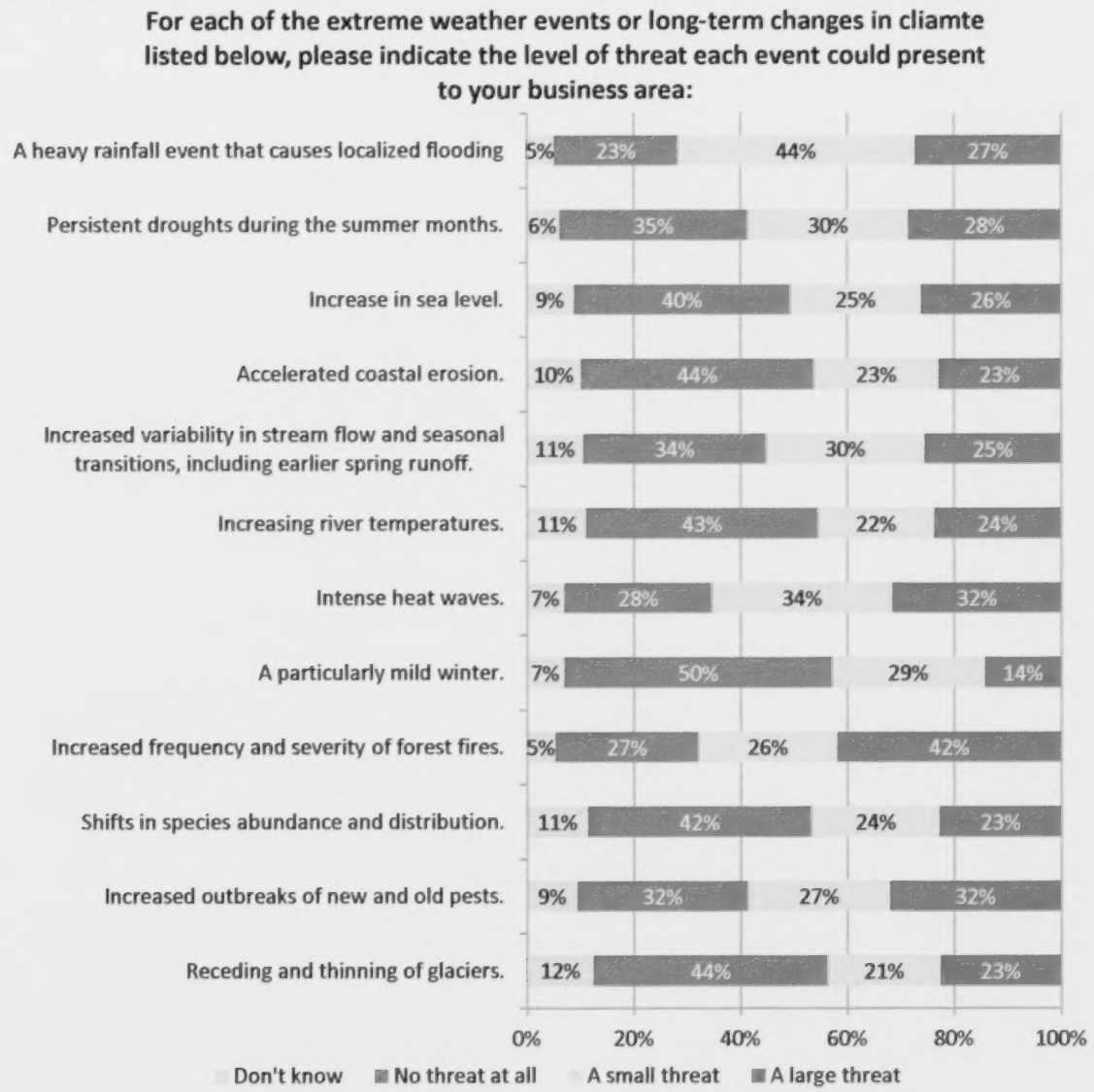
For the statements, "BC is well prepared for any threats related to climate change" and "Reducing greenhouse gases is all that is needed to avoid future climate change impacts", respondents in Administrative Support, Applied Leadership, Finance & Economics had higher than average agreement. Meanwhile, respondents from Information Technology and Science & Technical Officer positions had lower than average agreement.

Perceived Threats and Opportunities

Respondents were asked to report whether a series of extreme weather events or long-term changes in climate might threaten the specific work they do in the BCPS. Respondents were given the option to indicate that an event or change was "no threat at all", "a small threat", or "a large threat" or they had the option to answer "don't know".

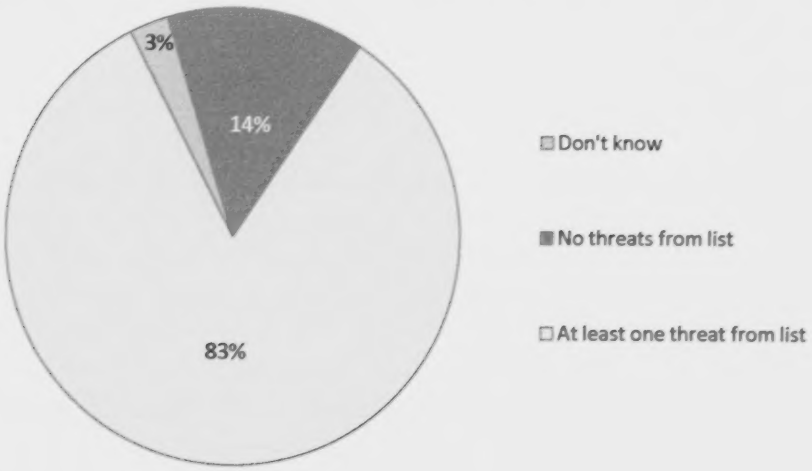
The overall proportion of respondents that answered each response is presented in Figure 2.

Figure 2: Perceived Threat of various Extreme Weather Events and Long-term Changes in Climate to Business Area



Over 80% of all respondents reported that at least one of the events or changes listed in the survey was either a small or large threat. Over 20% of all respondents reported that all 12 events or changes were a threat of small or large magnitude to their business area. Meanwhile 14% reported that none of the events or changes listed constituted a threat to their business area and 3% marked "don't know" for all 12 events or changes. These proportions are shown in Figure 3.

Figure 3: Proportion of Respondents Who Perceive Threats to their Business Area.



Regional Differences in Perceived Threats

Generally, for the other events and changes listed, respondents from Vancouver Island and the South Coast were significantly less likely than those from the Southern Interior or Northern regions to perceive a small or large threat. The two exceptions are increase in sea level and accelerated coastal erosion, both of which are perceived to be a small or large threat by over 50% of all respondents in the Vancouver Island and South Coast regions and by less than 40% in the North Region and less than 32% in the Southern Interior.

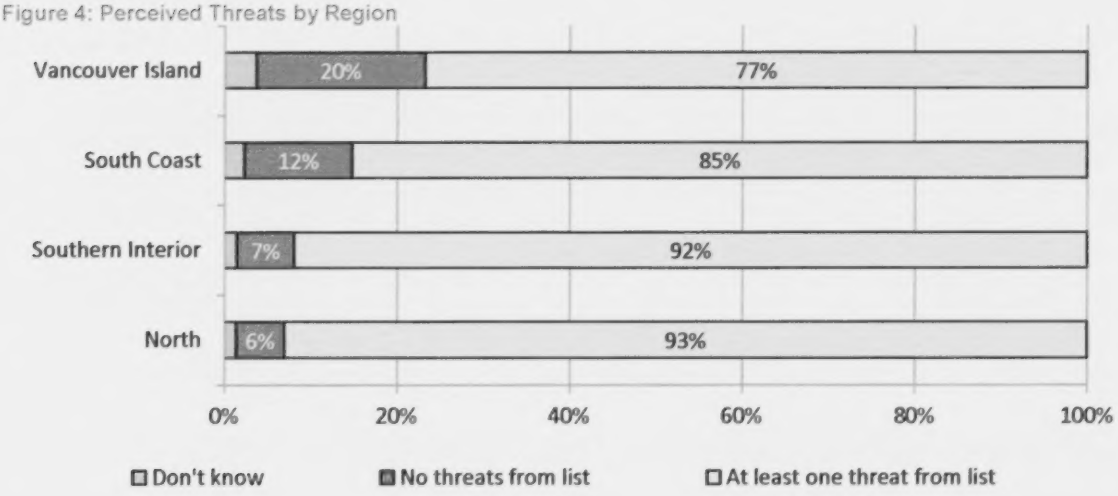
The proportion of respondents from each region who reported that each extreme weather events and long-term changes in climate was a small or large threat can be found in Table 5.

Table 5: Events or Changes by Region

	Vancouver Island	South Coast	Southern Interior	Northern	BC Public Service
	% Reporting a Small or Large Threat				
A heavy rainfall event that causes localized flooding	64%	76%	79%	84%	72%
Persistent droughts during the summer months.	51%	55%	76%	75%	64%
Increase in sea level.	55%	58%	31%	40%	67%
Accelerated coastal erosion.	50%	52%	28%	39%	66%
Increased variability in stream flow and seasonal transitions, including earlier spring runoff.	45%	53%	72%	79%	60%
Increasing river temperatures.	37%	45%	58%	62%	67%
Intense heat waves.	58%	64%	81%	78%	59%
A particularly mild winter.	33%	39%	61%	66%	64%
Increased frequency and severity of forest fires.	60%	63%	87%	88%	69%
Shifts in species abundance and distribution.	41%	43%	55%	64%	65%
Increased outbreaks of new and old pests.	51%	57%	70%	77%	64%
Receding and thinning of glaciers.	38%	46%	49%	56%	66%

While the majority of respondents, regardless of region, indicated that at least one of the events or changes was a threat, respondents from Vancouver Island were the least likely (77%) to report a threat while over 90% of respondents in the Southern Interior and Northern region indicated that at least one of the listed events or changes was a threat (see Figure 4 for details). Respondents from the Northern region were most likely (24%) to indicate that all 12 of the listed events were threats, followed by those from the South Coast (23%), Vancouver Island (21%) and finally the Southern Interior (18%).

Figure 4: Perceived Threats by Region



Perceived Threats by Ministry and Job Classification

Perceptions of the threats to business areas by extreme weather events and long-term changes in climate vary by ministry. Though not statistically significant, the Education & Culture group is the ministry grouping where the largest proportion of respondents answered "don't know" to all the potential threats listed in the survey (9%). In every other ministry 4% or less consistently answered "don't know".

Over 85% of respondents from TI, FLNRO, SD, CFD, Environment and the Other Resources group indicated that at least one event or change was a threat to their business area. However, within this larger group there was significant variation; 44% of respondents from Environment reported all 12 events or changes as threats while only 19% of those from CFD had reported all 12 as threats. The one event that was perceived to be less of a threat for TI, FLNRO, SD, CFD, Environment and the Other Resources group was mild winters. For respondents in FLNRO increase in sea level, coastal erosion and the receding and thinning of glaciers were perceived as less threatening than the other events or changes (over one-third of respondents in FLNRO perceived these as "no threat at all").

Over 20% of those from Health, AG, Finance, and the Service & Economy group reported that none of the events or changes listed was a potential threat to their business area (6 percentage points about the BCPS average). Subsequently, these same ministries had the lowest proportion of respondents who indicated that at least one of the events or changes was a threat to their business area (less than 75% for each ministry). Again, there is notable (but not statistically significant[8]) variation between these ministries; in the Service & Economy group 22% reported that all 12 events or changes were threats while only 13% of respondents from LCO and Health reported that all 12 events of changes constituted threats to their business area. The two events or changes that respondents from these ministries were likely to perceive as a threat were heavy rainfall and intense heat waves.

[8] While these differences seem large, they are not statistically significant because of the sample sizes of the groups.

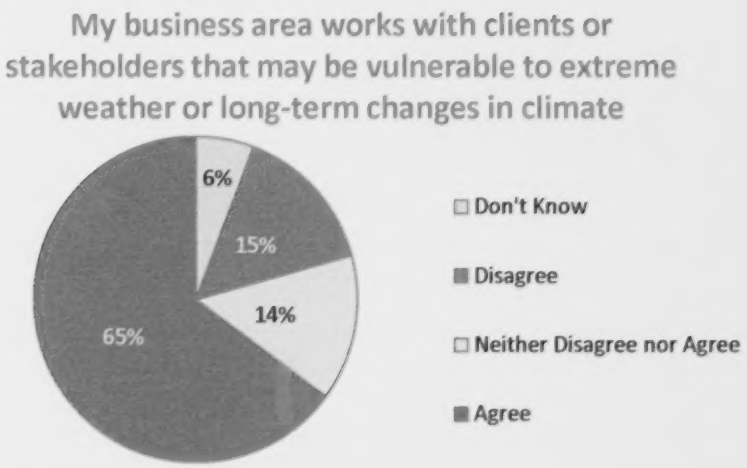
In terms of job classification, Science and Technical Officers (97%), followed by respondents from Enforcement & Corrections positions (95%) were the most likely to report that at least one of the events of changes was a threat to their business area. For these two groups, less than 4% of respondents indicated that none of the events or changes from the list was a threat. On the other end of the spectrum, less than 75% of respondents in Information Technology and Finance & Economics positions reported at least one event or change as a threat to their business.

There were no significant notable trends in the events or changes that respondents from different job classifications perceived as threats.

Vulnerability of Clients and Stakeholders

Beyond reporting perceived threats to their own business area, respondents were asked whether they agreed or disagreed with the statement, "My business area works with clients and/or stakeholders that may be vulnerable to extreme weather and/or long-term changes in climate." As shown in Figure 5 (below), 65% of all respondents either agree or strongly agree with this statement.

Figure 5: Vulnerability of Clients and Stakeholders



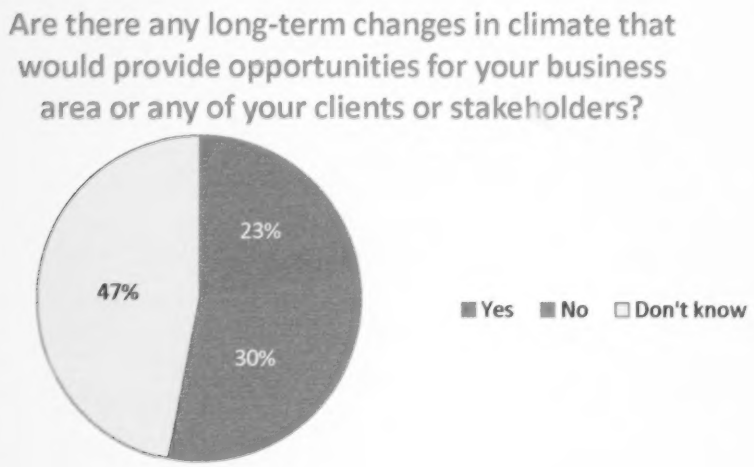
Vulnerability of Clients and Stakeholders by Ministry and Job Classification

Less than half of all respondents from AG and Health report that they have clients or stakeholders that may be vulnerable to extreme weather or long-term changes in climate (significantly less than the BCPS average). Meanwhile, respondents in FLNRO were most likely to agree that their business area works with clients or stakeholders that may be vulnerable to extreme weather or long-term changes in climate. At 86% agreement, FLNRO respondents were significantly more likely to agree with this statement than respondents from AG or Health, as well as CFD, Finance, LCO, PSSG, the Education & Culture group, and the Service & Economy group.

There is a similar split between the job classifications; just over half of all respondents in Administrative Support or Applied Leadership positions agree with the statement, while 85% of respondents in Science & Technical Officer positions agree. In this case, Science & Technical Officers were significantly more likely than any other group to agree with this statement.

Perceived Opportunities of Long-term Changes in Climate by Ministry and Job Classification

Overall, nearly 50% of respondents answered "don't know" when asked whether there are any long-term changes in climate that would provide opportunities for their business area, clients or stakeholders. Respondents from AG were the least likely to perceive any opportunities associated with long-term changes in climate (only 7% answered "yes"). AG respondents had the lowest proportion of respondents who answered "yes". Significantly fewer respondents in AG, CFD, Finance, Health, and PSSG (less than 15%) answered "yes", compared to respondents in any of the resources ministries (Environment, FLNRO, TI, and the Other Resources Group) where over 27% agreed that long-term changes in climate could provide opportunities for their business area. In particular, 42% of respondents from Environment and 46% of respondents in FLNRO believed that long-term changes in climate could mean opportunities for their business area.


Are there any long-term changes in climate that would provide opportunities for your business area or any of your clients or stakeholders?
23%
47%
30%
Yes
No
Don't know

Similar to perceived vulnerability of clients and stakeholders, respondents in Administrative Support and Applied Leadership positions were the least likely to perceive opportunities as a result of long-term changes in climate (12% and 14% respectively). Meanwhile, respondents in Science & Technical Officer positions were significantly more likely than any other group to answer "yes" when asked about potential opportunities. Science & Technical Officers were followed by those in Business & Strategic Leadership and Senior Administration & Research positions; 24% of each answered "yes" when asked if long-term changes in climate would provide any opportunities for their business area, clients or stakeholders.

Perceived Relevance of Extreme Weather Events and Long-term Changes in Climate

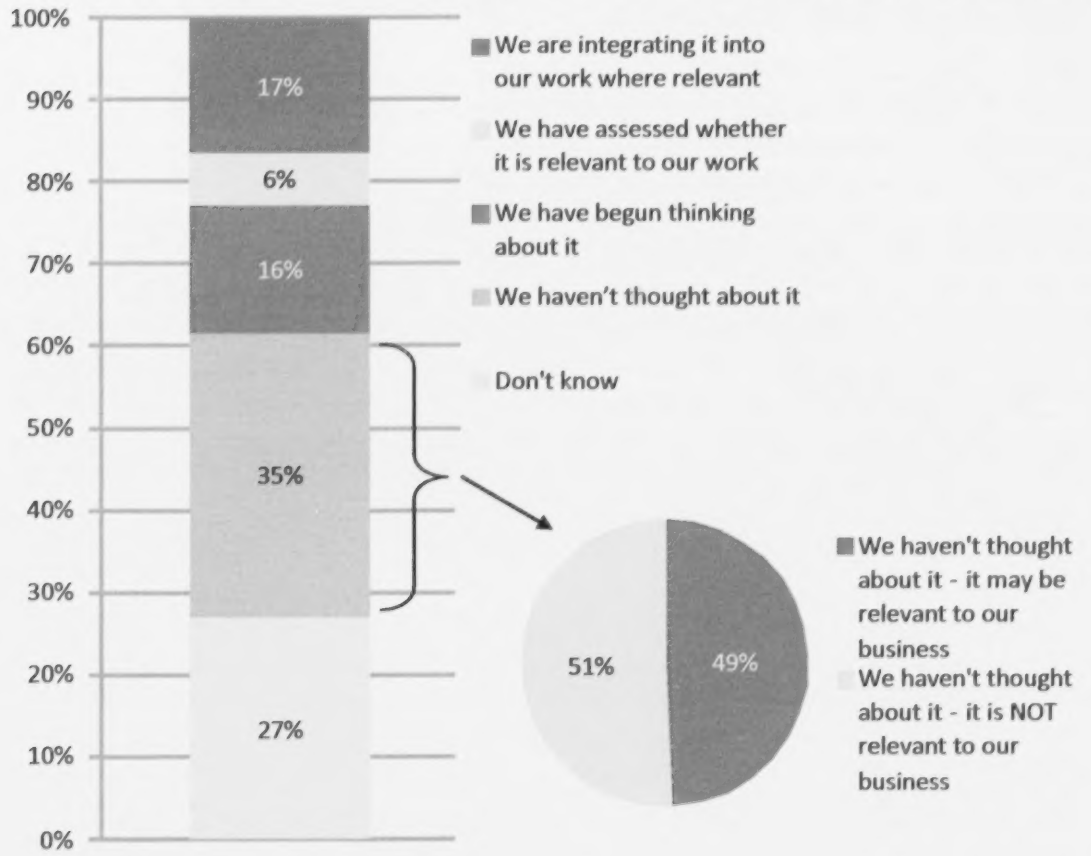
Respondents were asked which of the following statements best describe their business area's current position regarding the relevance of extreme weather events and/or long-term changes in climate to the work they do:

- We haven't thought about it
- We have begun thinking about it
- We have assessed whether it is relevant to our work
- We are integrating it into our work where relevant
- Don't know was also an option

As illustrated in Figure 6, 27% answered "don't know", 35% reported that their business area had not thought about it, 16% had begun thinking about it, 6% had assessed whether it is relevant and 17% reported that their business area was integrating it into their work where relevant.

Those who reported that their business area had not thought about it were asked a follow-up question, "Do you think that extreme weather events and/or long-term changes in climate will have any relevance to the work you do?" Nearly half (49%) of these respondents indicated that while they have not thought about it they agreed it could be relevant to the work they do.

Figure 6: Relevance of Extreme Weather Events and Long-term Changes in Climate
Thinking about your business area, which statement best describes your business area's current position regarding the relevance of extreme weather events and/or long-term changes in climate to the work you do.



Perceived Relevance by Ministry and Job Classification

Respondents in Environment and FLNRO were the least likely to have answered "don't know" or to have reported that they have not thought about them when asked about their business area's current position regarding the relevance of extreme weather events and long-term changes in climate. These two ministries were also the most likely (33% and 32% respectively) to report that they were integrating these events and changes into the work they do. Interestingly, while a large proportion of respondents from both TI (29%) and the Other Resources group (25%) indicate that they were integrating these plans into their work they also have relatively high rates of respondents answering "don't know" (25% and 24% respectively).

Respondents in Administrative Support positions (41%), the Ministry of Finance (28%) and the Ministry of AG (36%) were the most likely to answer "don't know" when asked about their business area's current position regarding the relevance of extreme weather events and long-term changes in climate.

Less than 15% of respondents in Business & Strategic Leadership and Science & Technical Officer positions answered "don't know". However, 37% of those in Business & Strategic Leadership positions reporting having not thought about extreme weather events and long-term changes in climate, compared to just 16% of those in Science & Technical Officers positions. Respondents in Science & Technical officer positions were 25 percentage points more likely than those in Enforcement & Corrections positions and Health, Education & Social Work positions to report that they are integrating these events and changes into their work.

The ministries where respondents were less likely to be integrating extreme weather events and long-term changes in climate into their work were AG, CFD, Health, and the Service & Economy group (less than 10% of respondents from each ministry answered "we are integrating it into our work"). These ministries, as well as LCO, PSSG, as well as the Education & Culture group were the most likely to report that while they have not thought about it, they do not believe it to be relevant to their business.

Planning for Extreme Weather Events and Long-term Changes in Climate

Respondents who answered "we have begun thinking about it", "we have assessed whether it is relevant to our work", or "we are integrating it into our work where relevant", when asked about their business area's current position on extreme weather events or long-term changes in climate were asked to identify how much of a priority planning for these events or changes is for their business area. Overall, 40% believed it to be either not a priority or a low priority, while 42% believed it to be a moderate or significant priority. The remaining respondents (nearly 20%) answered "don't know" when asked to identify how much of a priority planning for extreme weather events and long-term changes in climate were for their business area. These results are shown in Figure 7.

Figure 7: Planning and Prioritizing

Planning and Prioritizing by Ministry and Job Classification

Knowledge of business area priorities and planning for extreme weather events and long-term changes in climate may be largely the product of a respondent's position within their organization. As such, ministry may be less of a determinant of knowledge than job classification.

Respondents in AG and Health, as well as respondents in Administrative positions were the most likely to report that they don't know about their business area's priorities regarding extreme weather events and long-term changes in climate. Respondents from AG and Health, as well as LCO were also the most likely to be in Administrative positions. Within LCO, over 20% of respondents were in Administrative or Information Technology positions, the two positions most likely to report that they "don't know" about priorities or planning for extreme weather events and long-term changes in climate.

Respondents from AG and the Service & Economy ministry group were the most likely to report that planning for these events and changes was not a priority. Respondents from the Service & Economy group were also the most likely to be from Applied Leadership positions, the job classification most likely to report that this type of planning is not a priority (60% indicate that it is either not a priority or a low priority).

Around half of all respondents from AG, CFD, Finance, Health, LCO, and Education & Culture, report that planning is either not a priority or a low priority. Similarly, around 50% of respondents from Applied Leadership, Business & Strategic Leadership and Senior Administration & Research positions reported that planning for extreme weather events or long-term changes in climate was either not a priority or a low priority. Respondents in Business & Strategic Leadership positions were the group least likely to answer "don't know" when asked how significant a priority planning for extreme weather events and long-term changes in climate is for their business area.

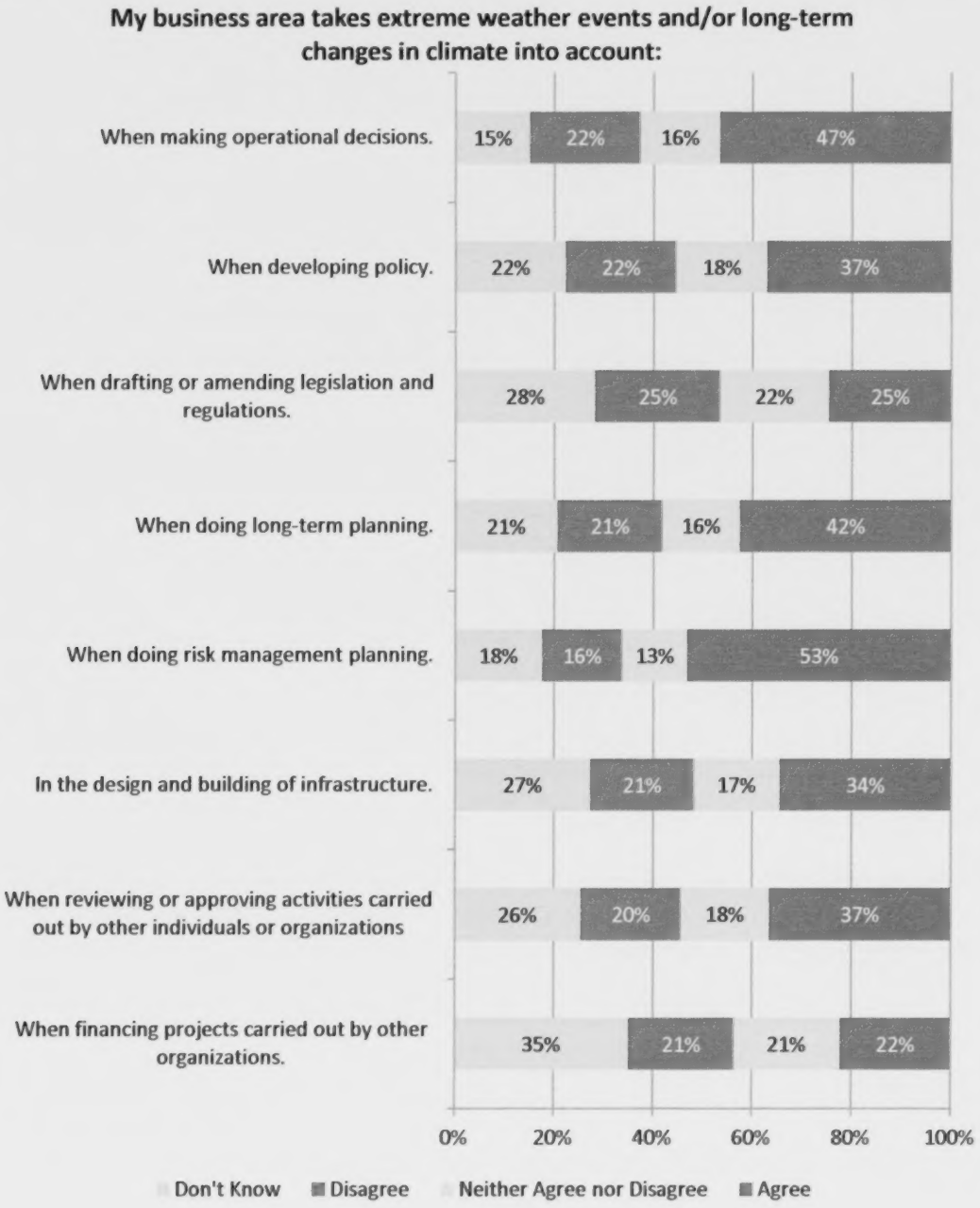
On the other hand, between 40% and 50% of respondents from PSSG and SD, over 50% of respondents from Environment and FLNRO, and 66% of respondents from TI reported that this type of planning is a moderate or signification priority. Not surprisingly, over 60% of respondents in Science & Technical positions (97% of whom work in FLNRO, Environment, TI or the Other Resource group) indicate that planning for extreme weather events and long-term changes in climate is a moderate or significant priority for their business area.

Planning for Extreme Weather Events and/or Long-term Changes in Climate

Respondents were asked to indicate their level of agreement with a series of statement about planning for extreme weather events and long-term changes in climate. The activity in the series that yielded the highest agreement was risk management planning (53% agreed that their business takes extreme weather event and/or long-term changes in climate into account when doing risk management planning). Operational decisions and long-term planning followed at 47% and 42% agreement respectively. These three activities along with "when developing policy" also garnered the lowest proportions of respondents who answered "don't know".

Less than one quarter of all respondents agreed that their business area takes into account extreme weather events or long-term changes in climate when drafting or amending legislation and regulations (25%) or when approving activities carried out by other individuals or organizations (22%). For both these statements, a larger proportion of respondents answered "don't know" than agreed. Figure 8 illustrates the proportion of respondents who disagreed, neither disagreed nor agreed and agreed for each statement.

Figure 8: Agreement about Taking Extreme Weather Events and Long-term Changes in Climate into Account in Business Area Activities



Planning for Extreme Weather Events and Long-term Changes in Climate By Ministry and Job Classification

In general, respondents from AG and CFD were the least likely to agree that their business area takes extreme weather events and long-term changes in climate into account when engaging in any of the activities (11% to 43% agreement depending on the activity). On the other hand, respondents from Environment and TI had the greatest levels of agreement (22% to 67% agreement depending on the activity). For all tasks except "when financing projects carried out by other organizations", respondents from Environment and TI were significantly more likely than respondents from AG and CFD to agree.

Respondents from FLNRO had particularly high levels of agreement compared to the BCPS average when asked if they take extreme weather events and/or long-term changes in climate in account when making operational decisions, when developing policy, when drafting or amending legislation and regulations, and when doing long-term planning.

Nearly half of all respondents from Health (46%) agreed that their business area takes these events and changes into consideration in the design and building of infrastructure compared to less than 20% of respondents from Finance and SD.

Respondents in Health were the least likely to agree that extreme weather events or long-term changes in climate are taken into account in their business area. Meanwhile, in general, respondents from Business & Strategic Leadership and Science & Technical Officers were more likely than the average BCPS employee to agree that these events and changes are considered in their business area. Nearly two-thirds of respondents from Applied Leadership positions and in Business & Strategic Leadership positions agreed that their business area takes extreme weather events or long-term changes in climate into account when doing risk management planning. Those in Applied Leadership, however, are significantly less likely than those in Business & Strategic Leadership positions to agree that their business area considers those things in the design and building of infrastructure. In general, respondents from Business & Strategic Leadership positions have above average levels of agreement on all activities except financing projects carried out by other organizations.

Experiences with Extreme Weather Events

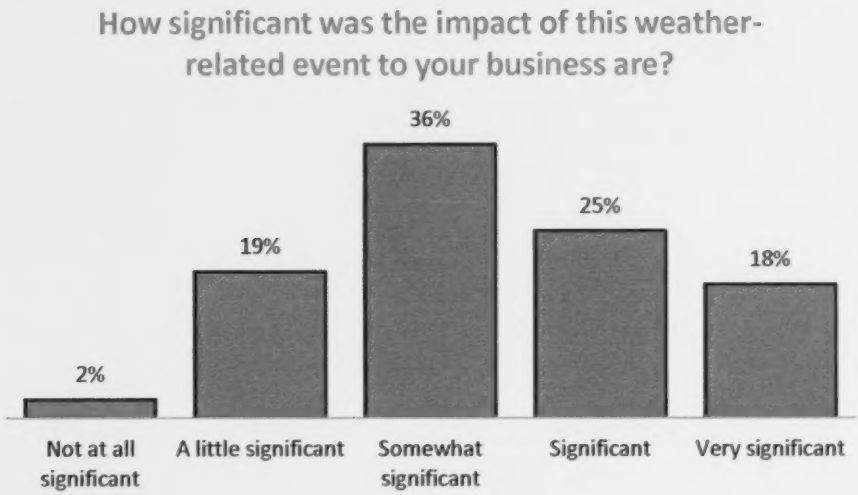
Over half of all respondents (55%) indicated that their business area had not been affected by any weather-related events in the past 12 months, 30% reported they had and 15% answered "don't know".

Significance of Extreme Weather Event

Respondents whose business area had experienced a weather-related event in the past 12 months were asked to indicate the significance of the events impact on their business area. On a 5 point scale from "not at all significant" to "very significant", 79% rated the event as "somewhat significant", "significant" or "very significant". These results are shown in Figure 9.

Respondents who reported that their business area had experienced a weather-related event in the past 12 months were significantly more likely than those who had not to report that at least one of the events or changes listed in the survey was either a small or large threat (98% compared to 75% of those who did not experience an event).

Figure 9: Significance of Event



Experiences with Extreme Weather Events by Ministry and Region

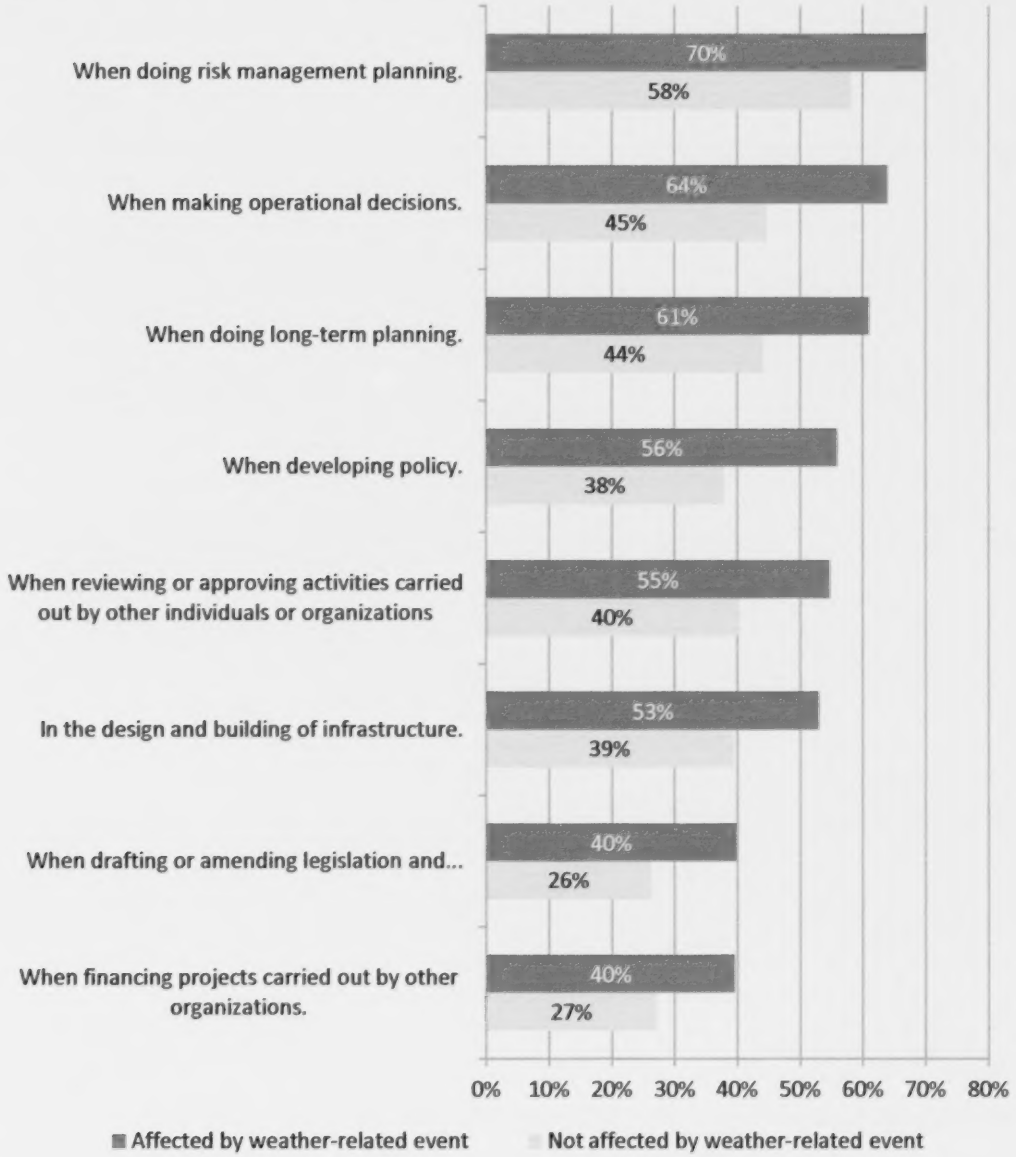
Over 40% of respondents from Environment, 51% of respondents from FLNRO, and 64% of respondents from TI reported that their business area had been affected by a weather-related event in the past 12 months. Many of these respondents were in Science & Technical Officer positions, the only job classification where more than half of respondents (61%) indicated that they had been affected by a weather-related event. Meanwhile, respondents from AG, Finance, LCO, and the Service & Economy ministries were significantly less likely to report having been affected (with less than 20% in each ministry answering "yes").

Respondents from Northern BC were most likely to report having been affected by a weather-related event (53%), which was significantly different from their colleagues in the South Coast (27%) and Vancouver Island (23%).

Experiences with Extreme Weather Events by Priority for Planning

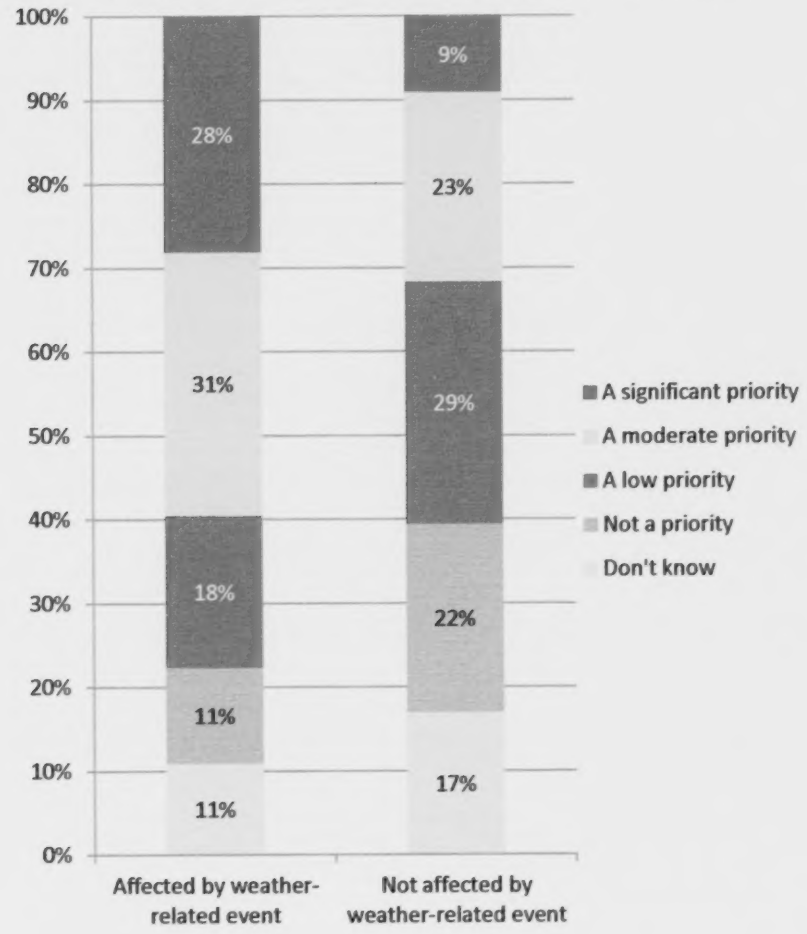
As shown in Figure 9, respondents whose business area had been affect by a weather-related event in the past 12 months were significantly more likely to agree that their business area takes extreme weather events and long-term changes in climate into account when engaging in business activities.

Figure 10: Effect of Recent Weather-related Event on Business Area Activities



Not surprisingly, respondents whose business area had been affected by a weather-related event in the past 12 months were almost 20 percentage points more likely to report that planning for extreme weather events or long-term changes in climate are a priority for their business area than those who had not had this recent experience (shown in Figure 11).

Figure 11: Priority of Planning by Incident of Recent Weather-Related Event



Attitudes and Barriers to Preparing for Climate Change

When asked about attitudes and barriers within their business area related to preparing for climate change, the majority disagreed with the statement, "considering climate change when developing or changing policy is too complex" (only 17% agreed with this statement). Meanwhile nearly half of all respondents agree with the following statements:

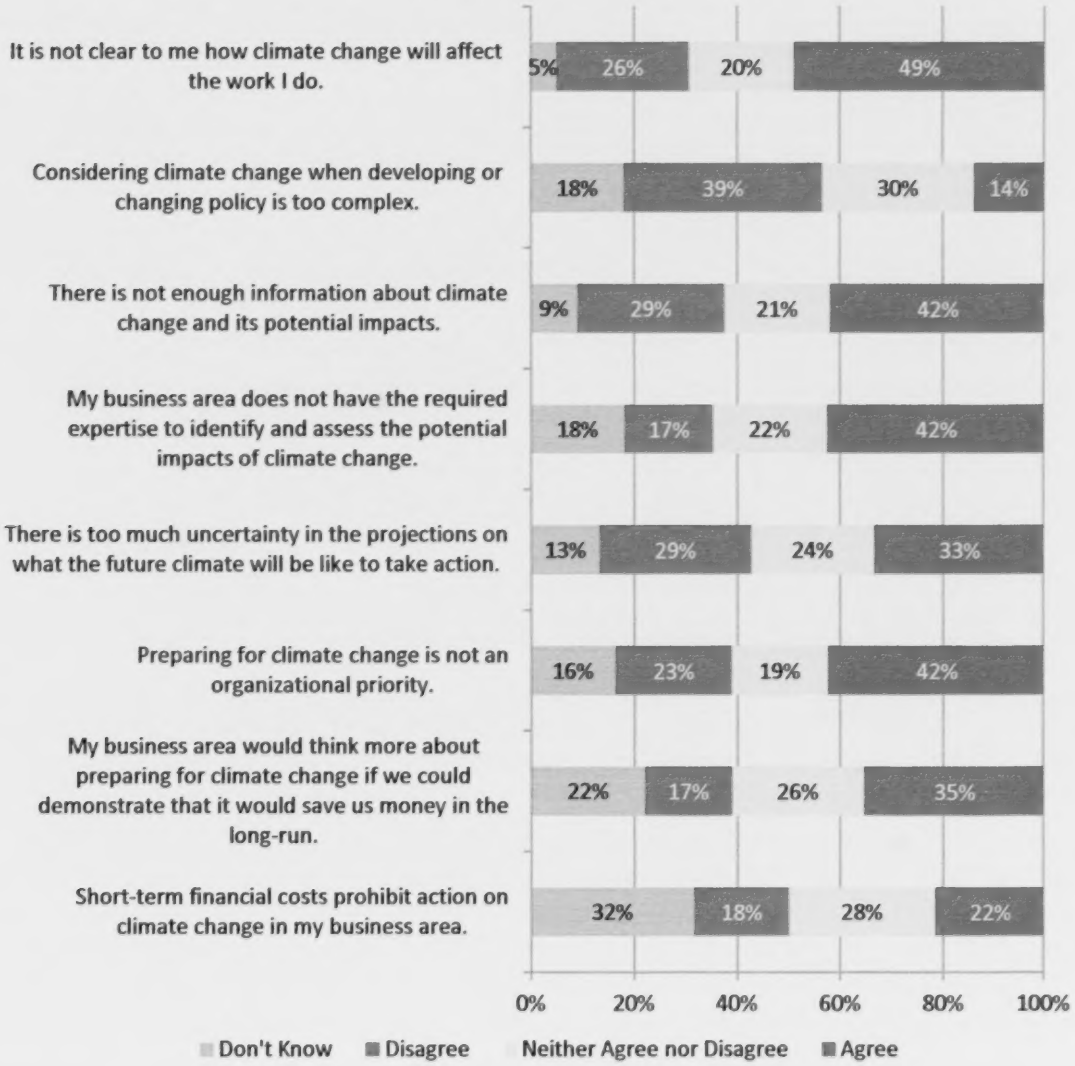
- It is not clear to me how climate change will affect the work I do.
- Preparing for climate change is not an organizational priority.
- My business area does not have the required expertise to identify and assess the potential impacts of climate change.
- There is not enough information about climate change and its potential impacts.

The statement, "It is not clear to me how climate change will affect the work I do" garnered the lowest proportion of respondents who answered "don't know" (5%).

The financial aspect of preparing for climate change (measured using the following statements, "Short-term financial costs prohibit action on climate change in my business area" and "My business area would think more about preparing for climate change if we could demonstrate that it would save us money in the long-run") were not perceived to be the top barriers to preparing for climate change. The proportion of respondents who agreed with each statement is shown in Table 6.

Table 6: Attitudes and Barriers

Please indicate your level of agreement with the following statements related to attitudes and barriers when it comes to preparing for climate change in your business area



Attitudes and Barriers by Ministry and Job Classification

Compared to the average BCPS employee, respondents from resource ministries including Environment, FLRO, and TI are significantly less likely to agree with the statements, "It is not clear to me how climate change will affect the work I do" and "Preparing for climate change is not an organizational priority". Also, respondents from both Environment and TI are also less likely than the average BCPS employee to agree with the statement, "My business area does not have the required expertise to indentify and assess the potential impacts of climate changes".

In general, respondents from CFD, Finance, Health and Social Development have high agreement when asked about barriers related to preparing for climate change within their work unit.

Compared to over 50% agreement among all other job classifications, only 32% of respondents in Science and Technical Officer positions agreed with the statement, "It is not clear to me how climate change will affect the work I do". Less than 45% of respondents in Administrative Support positions and less than 35% of respondents in Science and Technical Officer positions agreed with the statement, "Preparing for climate change is not an organizational priority".

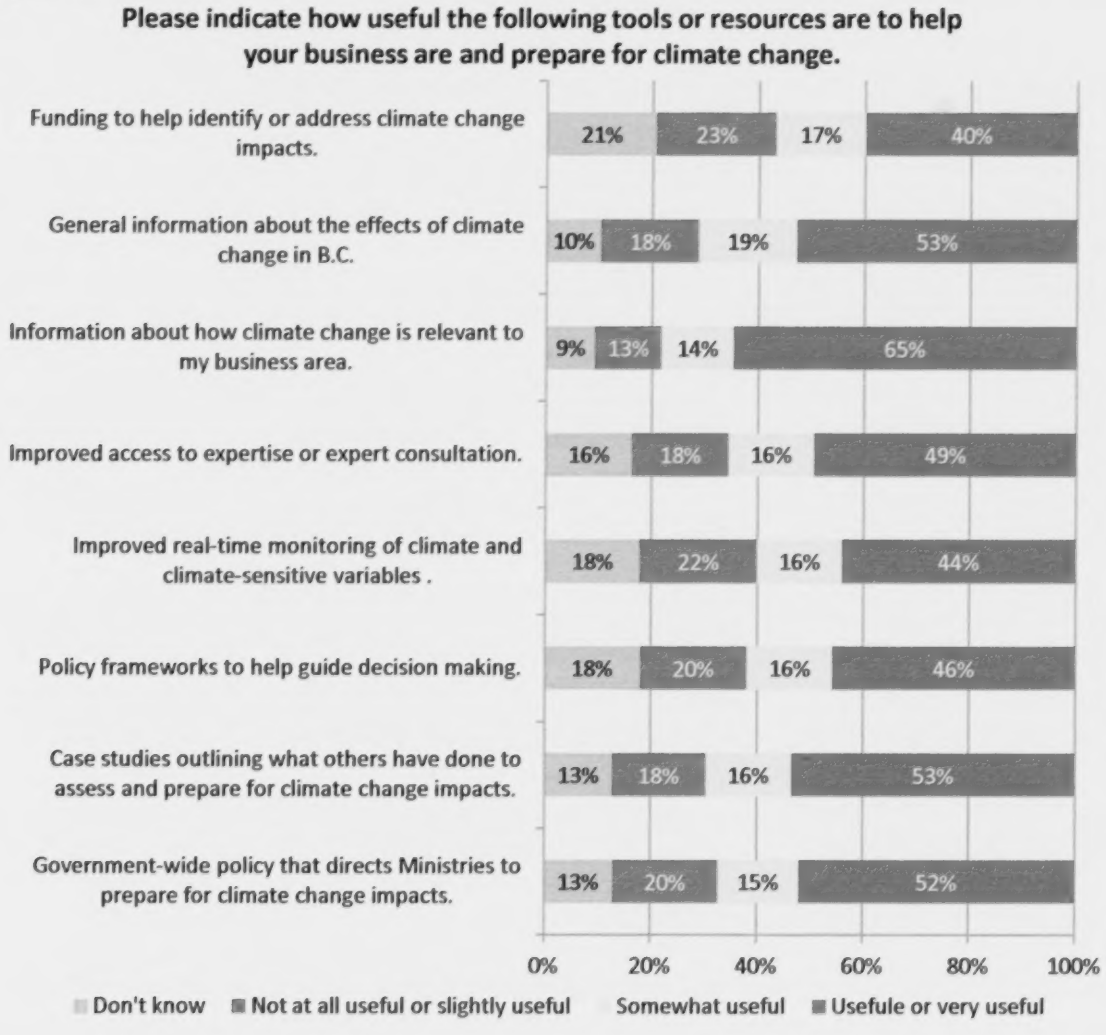
Tools and Resources for Preparing for Climate Change

Generally, the majority of respondents found all the tools or resources listed in the survey to be useful. When responses to a 5 point scale from "not at all useful" to "very useful", were placed in ranked order from least to most useful[9], the top two resources or tools were "Case studies outlining what others have done to assess and prepare for climate change impacts" and "Information about how climate change is relevant to my business area."

Similar to the attitudes and barriers within their business area related to preparing for climate change, financial resources ("Funding to help identify or address climate change impacts") were not considered to be the most important resource to help their business area assess and prepare for climate change. The proportion of respondents who agreed with each statement is shown in Figure 12.

[9] Most useful is defined as the highest proportion of respondents indicating that the tool or resources was either "useful" (4 on the 5 point scale) or "very useful" (5 on the 5 point scale).

Figure 12: Tools and Resources for Preparing for Climate Change



Perceived Usefulness of Tools and Resources by Ministry and Job Classification

For respondents from all ministries and job classifications, information about how climate change is relevant to their business area was rated in the top two most useful tools or resources. Over half of all respondents from CFD, Environment, LCO, PSSG, the Education & Culture group, the Other Resources group and the Service & Economy group also favoured case studies outlining what others have done to assess and prepare for climate change impacts as a useful tool or resource.

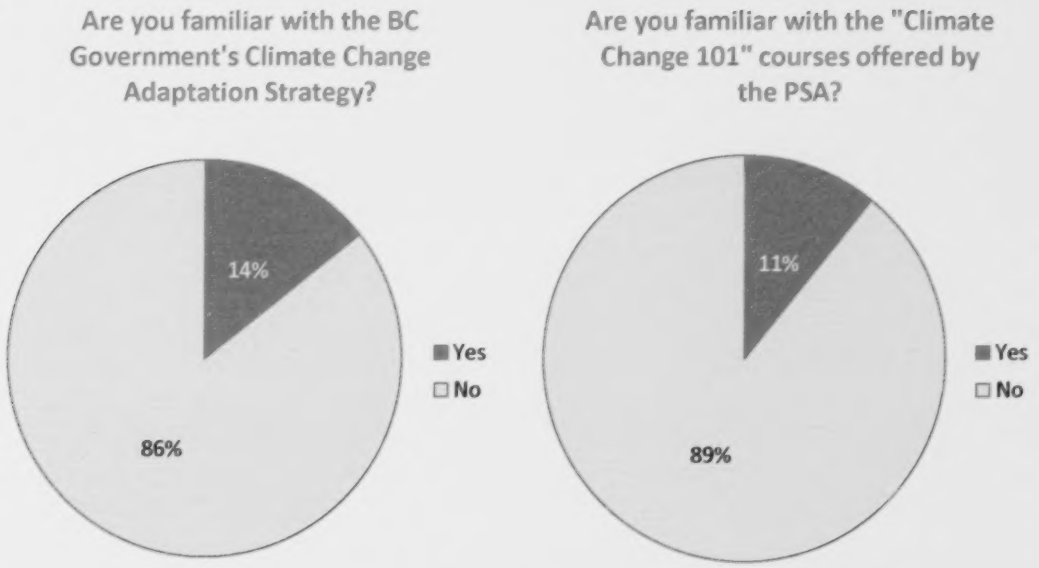
Compared to respondents within other job classifications, those in Business & Strategic Leadership positions did not perceive government-wide policy that directs ministries to prepare for climate change impacts (49% reported this would be useful or very useful compared to a BCPS average of 54%) or improved real-time monitoring of climate and climate-sensitive variables (40% reported this to be useful or very useful compared to 60% in the BCPS overall) to be valuable. Respondents from Finance & Economics positions were also notably less likely to find "improved real-time monitoring of climate and

climate sensitive variables" useful or very useful than respondents in other positions, although this finding is not statistically significant.

Familiarity with Climate Change Adaptation Resources

In the final two questions in the survey, respondents were asked if they were familiar with the BC Government's Climate Change Adaptation Strategy and the "Climate Change 101" courses offered by the PSA. Fourteen percent of respondents were familiar with the Climate Change Adaptation Strategy and 11% were family with the 'Climate Change 101' courses. Familiarity is illustrated in Figure 13.

Figure 13: Familiarity with BC Government Tools and Resources



Awareness by Job Classification

Less than 10% of respondents in Administrative Support, Enforcement & Corrections, Finance & Economics, Health Education & Social Work, and Information Technology positions were familiar with the BC Government's Climate Change Adaptation Strategy while over 20% of Business & Strategic Leaders and nearly 35% of Science & Technical Officers were familiar with the strategy.

The ministries where familiarity with the BC Government's Climate Change Adaptation Strategy was the highest were Environment (39%) and FLNRO (30%). Between 10% and 19% of respondents from SD, TI, Education & Culture, Service & Economy and the Other Resources groups were familiar with the strategy. The ministries with the lowest familiarity were AG, CFD, Finance, Health, LCO, and PSSG (less than 10% for each ministry).

Less than 10% of respondents in Administrative Support, Applied Leadership, Enforcement & Corrections, Finance & Economics, Health Education & Social Work, and Legal Counsel positions were familiar with the Climate Change 101 courses compared to nearly 20% familiarity among those in Business & Strategic Leadership and Science & Technical Officer positions.

Familiarity with the Climate Change 101 courses was highest in Environment (21%), FLNRO (20%) and the Service & Economy group (26%). Familiarity with the course was particularly low among respondents in CFD (4%).

Conclusion

The findings of this study show that awareness and understanding of climate change varies by ministry and job classification among BC Public Service Employees. In some cases, knowledge about how a business area is planning for climate change impacts and prioritizing adaption depending on the respondents' job classification, for example, Science & Technical Officers are less likely to answer "don't know" when asked about what their business area is doing in response to climate change. In other cases, a respondents' ministry will determine whether they have considered the potential effects of climate change.

Lack of knowledge is one of the main challenges faced by CAS. Currently, only a small number of respondents are familiar will the two main BC Government resources related to climate change (only 14% are familiar with the Climate Change Adaptation Strategy and 11% are familiar will the Climate Change 101 course). Over half of all respondents agree that it is not clear to them how climate change will affect the work they do and that their own business area does not have the required expertise to identify and assess the potential impacts of climate change.

Respondents have identified activities throughout the survey where CAS could support their business area such as assistance taking extreme weather events and long-term changes in climate into account when drafting or amending legislation and regulation and when financing projects carried out by other organizations. Overall respondents found the tools and resources listed in the survey to be useful or very useful in helping their business area asses and prepare for climate change.

APPENDIX A: METHODOLOGY

Questionnaire Design and Pilot Study

The three goals of the Preparing for a Changing Climate Survey were:

1) Establish a baseline of organizational awareness, understanding and motivations in relation to climate change adaptation
2) Determine the current level of implementation on adaptation in decision making and barriers to implementation
3) Gain insights into the key issues related to climate change adaptation for Ministries and public service employees.

The main challenge in designing this questionnaire was using terminology that would be technically accurate but also easy to understand for respondents who have little or no knowledge about weather and climate. To overcome this challenge, in collaboration with CAS, BC Stats developed a list of six important definitions for the survey. These definitions were provided at the beginning of the web survey. Throughout the survey respondents were able to hover over the text with their mouse to see the definitions (see Table 9 for definitions).

Table 7: Survey Definitions

Climate change impacts refer to the effects of climate change on natural or human systems.
Extreme weather events refer to weather occurrences that are notable, rare or unique, or otherwise significant in their impacts, effects or outcomes. Extreme events tend to refer to such extremes as heat waves, storms, floods and droughts.
Long-term changes in climate refer to the long-term average of weather, such as an increase in the average atmospheric temperature.
Your business area refers to you and the people in your work unit who do similar work, have similar projects and have similar types of clients and/or stakeholders as you.
Threat refers to external elements in the environment that could negatively impact a project, program or business. For example events or circumstances that would jeopardize a projects' timeline, budget, or success.

BC Stats and CAS employed a collaborative process to design the *2012 Preparing for a Changing Climate survey* over a two month period in the fall of 2011. The final survey instrument was a product of consultation with experts in survey design and climate change.

A small pilot survey was also administered one month prior to the official launch (December 2011) of the survey to test the quality of data obtained by the questions, and comprehension of the concepts in the questionnaire. BC Stats sent invitations to 43 BC Public Service Employees. The sample was split between respondents who work in the area of climate change and adaptation and those who do not. The pilot garnered a 56% response rate. Pilot respondents provided feedback on all questions and were

given opportunities to comment on their comprehension of terms and ability to respond based on their day-to-day work in the BC Public Service. Minor changes to the questionnaire were implemented following the pilot.

The final questionnaire included 59 questions and was divided into five sections:

1. Understanding Climate Change
2. Potential Impacts to Business Area
3. Business Area Policies and Activities
4. Attitudes and Barriers
5. Information and Support

See Appendix B for copies of the invitation email, reminder email and the final questionnaire.

Survey Administration and Sample Population

BC Stats sent out email invitations to 5,999 BC Public Service employees on behalf of Cairine MacDonald, Deputy Minister of Environment on January 24th, 2012. Respondents were informed that their identity would be kept confidential by BC Stats, as guaranteed under Section 9 of the Statistics Act. A follow-up email was sent on February 2nd and a final reminder email was sent on February 9th. No responses were accepted after February 10th, 2012.

Respondents were sampled proportionately from all 19 ministries in the BC Public Service as of December 16th, 2011. Employees of the Climate Action Secretariat (CAS) were removed from the sampling frame.

Response Rate

Of the 5,999 BC Public Service employees who were invited to complete the survey, 164 were deemed out of scope because they were out of the office during the survey fielding window or otherwise ineligible to complete the survey (e.g. recent retirees, undeliverable email, etc.). The total number of eligible respondents was 5,835. Of these eligible respondents, 199 answered only part of the survey. The 43 respondents who completed the survey up to and including Question 8 ("Over the past 12 months, has your business area been affected by any weather-related events?") were considered complete and counted in the final data. Overall 2,981 out of the 5,835 eligible respondents completed the survey producing a response rate of 51%.

Table 8: Response Rate

	Count
Complete (including eligible partial completes)	2981
Did Not Complete	2854
Total Eligible	5835
Out of Scope, Not Eligible	164
Response Rate (Complete / Total Eligible)	**51%**

Margin of Error

Statistics produced from sample surveys are subject to various sources of error, such as sampling error. The term "error" does not refer to a mistake or a known error but to the fact that there may be some difference between the survey statistic and the actual statistic for the entire population that the sample survey is meant to represent. For this reason, statistics produced from a sample are referred to as "estimates": they estimate what the actual statistics are for the entire population, or for any subgroup in the population. As a technical term, sampling "error" refers to the fact that an estimate produced from a sample necessarily contains some degree of uncertainty. It is possible to quantify the uncertainty of an estimate produced from survey sample data.

One common measure of uncertainty is the "confidence interval," which expresses the likely range of the actual value for the population, around the "point" estimate produced from the survey data. The margin of error is the half-width around this point estimate. The margins of error for various ministries sampled in this survey range from +/- 4.5% for Forests, Lands and Natural Resource Operations to +/- 9.7% for the ministry grouping of Advanced Education, Education and Community, Sport and Cultural Development[10]. These margins of error are calculated based on the sample size for each ministry or ministry grouping. There were 465 respondents from the ministry of Forests, Lands and Natural Resource Operations resulting in a small margin of error. This means the true values are expected to fall somewhere within the confidence interval, and could be as much as 9.1% different than the estimate. For the much small ministry grouping of Advanced Education, Education and Community, Sport and Cultural Development with a sample size of 102 respondents the true values could be as much as 19.4% different from the estimate. As in nearly all sample surveys that present confidence intervals, this calculation uses the 95% confidence interval, which means that there is a 95% certainty that the interval for any given estimate contains the true value.

The overall number of responses to the survey is 2,981 which means the estimates for the entire BC Public Service can be considered accurate with a margin of error of +/- 1.8%. This means for any given question if 50% of respondents provided a particular answer and this survey was repeatedly administered, between 48.2% and 51.8% of respondents would provide that same answer, 19 times out of 20. The individual margins of error for each ministry are shown in Table 11.

Table 9: Margins of Error by Ministry

	Sample size	Margin of Error: 95% Confidence
Forests, Lands, & Natural Resource Operations	465	+/- 4.5%
Children & Family Development	441	+/- 4.7%
Public Safety & Solicitor General	309	+/- 5.6%
Attorney General	302	+/- 5.6%
Labour, Citizens' Services &Open Government	276	+/- 5.9%
Social Development	266	+/- 6.0%
Transportation & Infrastructure	188	+/- 7.1%
Health	147	+/- 8.1%

[10] The grouping of ministries is outlined in the section titled "Ministry Groupings" (page 8).

Finance	135	+/- 8.4%
Environment	124	+/- 8.8%
Public Service Agency; Premiers' Office; and Jobs, Tourism & Innovation	120	+/- 8.9%
Agriculture; Energy & Mines; and Aboriginal Relations & Reconciliation	106	+/- 9.5%
Advanced Education; Education; and Community, Sport & Cultural Development	102	+/- 9.7%
Total, BC Public Service	***2981***	***+/- 1.8%***

APPENDIX B: EMAILS AND QUESTIONNAIRE

The invitation email, reminder email, and questionnaire for the survey are shown below.

INVITATION EMAIL ----------

Preparing for a Changing Climate Survey

Has a weather event ever impacted the work that you do? Wondered how weather events might affect the services that the BC Government provides?

I am writing to ask you to participate in an important survey about weather and climate-related risks and opportunities facing the BC Public Service.

A random sample of public service employees has been selected from all BC Government ministries for this survey. **Even though you may feel that the survey topic is not directly relevant to your work, we would still like to hear from you.** The survey has been designed to reflect a diverse range of government objectives and employee activities.

Results from this survey will be used to help establish a better understanding of awareness about and action on climate-related risks to and opportunities for BC government's business.

Responses are requested by 4:30 pm, February 10th, 2012. The survey won't take longer than 15 minutes to complete. This survey is voluntary, and you can help us by sharing your thoughts and opinions.

This survey is being conducted by BC Stats on behalf of the Ministry of Environment, and data collected for this survey is protected under the authority of the *Statistics Act*. As such, please be assured that your answers will remain completely confidential. Demographic information from the Corporate Human Resource Information and Payroll System (CHIPS) may be linked to your responses; however, only aggregate results will be reported to the Ministry of Environment. If examples of your comments are quoted in the report, all information that could potentially be used to identify a respondent will be removed.

If you have any questions about this survey or concerns about confidentiality, please contact the BC Stats survey administrator at BCStats.SurveyMail3@gov.bc.ca or by calling (250) 356-7982. If you would prefer not to receive reminders to complete this survey, please inform the survey administrator.

To go to the survey, **click here**. This link has been customized for your use; please do not forward it to anyone else. As soon as you have completed the survey, this link will no longer be accessible.

Thank you in advance for participating in the survey. Results from the survey will be made available in 2012.

Cairine MacDonald
Deputy Minister, Ministry of Environment

REMINDER EMAIL ----------

Last week you received an invitation to participate in a survey about weather and climate-related risks and opportunities facing the BC Public Service.

A random sample of public service employees from all ministries have been invited to participate. This survey will create a baseline measure of BC Public Service awareness of and action on for climate related risks and opportunities. **Even though you may feel that the survey topic is not directly relevant to your work, we would still like to hear from you.**

This is a reminder that the deadline for completing this survey is approaching. Please take the time to respond by 4:30pm on **DATE**. Please do not forward this survey to others, as it was intended for you in particular.

This survey is being conducted by BC Stats on behalf of the Ministry of Environment, and data collected for this survey is protected under the authority of the *Statistics Act*. As such, please be assured that your answers will remain completely confidential. Demographic information from the Corporate Human Resource Information and Payroll System (CHIPS) may be linked to your responses; however, only aggregate results will be reported to the Ministry of Environment. If examples of your comments are quoted in the report, all information that could potentially be used to identify a respondent will be removed.

If you have any questions about this survey or concerns about confidentiality, please contact the BC Stats survey administrator at BCStats.SurveyMail3@gov.bc.ca or by calling 1-888-447-4427. If you do not wish to complete this survey, please inform the survey administrator.

To go to the survey, click here. If you have started but not yet completed your survey, clicking the link will take you to where you left off.

Thank you for your assistance.

Beth Collins, Survey Administrator, BC Stats

Preparing for a Changing Climate Survey

Changes in long-term climate and the frequency of extreme weather events are already affecting B.C.'s environment, economy and communities. For example:

- The mountain pine beetle infestation, triggered in part by warmer winters, has affected more than 17.5 million hectares of forest in B.C.
- Seasonal droughts demonstrated the vulnerability of community and irrigation water supplies.
- Changing river water levels have challenged tourism operators such as rafting companies who rely on predictable seasonal water flows.

B.C. will increasingly need to respond to these and other climate change impacts in order to continue to protect health and safety, maintain infrastructure, manage natural resources, protect vulnerable populations, and achieve environmental, social and economic sustainability.

The following survey questions explore the links between climate, weather and the work that the B.C. Government does across the province. The survey has been designed to reflect a diverse range of Ministry objectives and staff activities. **Even though you may feel that the survey topic is not directly relevant to your work, we would still like to hear from you.**

This survey is voluntary and will take you approximately 15 minutes to complete. All feedback you give will be kept confidential by BC Stats under Section 9 of the *Statistics Act*. BC Stats cannot disclose information that could be used to identify an individual response to any person, organization or government agency.

We appreciate your feedback and thank you for taking the time to provide your input. Responses are requested by **4:30pm on.**

CONFIDENTIALITY: Responses to this questionnaire will be kept confidential by BC Stats. Under Section 9 of the *Statistics Act*, BC Stats cannot disclose information that could be used to identify an individual return to any person, organization or government agency. Section 9 of the *Act* applies despite the provisions of the *Freedom of Information and Protection of Privacy Act (FOIPPA)* other than section 44(1) (b), (2), and (2.1) and (3) of the act. Demographic information from the Corporate Human Resources Information and Payroll System (CHIPS) may be linked to your responses; however only aggregate results will be reported to the Ministry of Environment. Comments are a valuable part of the survey. BC Stats will make every effort to remove any information that could potentially be used to identify a respondent. To help us preserve your anonymity, please avoid personalizing your comments.

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Click here to review some important definitions. Throughout the survey, you can hover over text that is underlined and highlighted in blue to see the definition. *<Pop up with all definitions>*

Important Definitions:

Climate change impacts refer to the effects of climate change on natural or human systems.

Extreme weather events refer to weather occurrences that are notable, rare or unique, or otherwise significant in their impacts, effects or outcomes. Extreme events tend to refer to such extremes as heat waves, storms, floods and droughts.

Long-term changes in climate refer to the long-term average of weather, such as an increase in the average atmospheric temperature.

Your business area refers to you and the people in your work unit who do similar work, have similar projects and have similar types of clients and/or stakeholders as you.

Threat refers to external elements in the environment that could negatively impact a project, program or business. For example events or circumstances that would jeopardize a projects' timeline, budget, or success.

Throughout the survey, you can hover over text that is underlined and highlighted in blue to see the definition.

1.) Please indicate your level of agreement with the following general statements.

	1 = Strongly Disagree 2 = Disagree 3 = Neither Disagree nor Agree 4 = Agree 5 = Strongly Agree DK = Don't know / No Opinion					
	1	**2**	**3**	**4**	**5**	**DK**
a.) The impacts of climate change are currently being felt around the world.	O	O	O	O	O	O
b.) Climate change has already impacted B.C..	O	O	O	O	O	O
c.) Climate change impacts will pose future *threats* to B.C.	O	O	O	O	O	O
d.) Climate change impacts will pose future *opportunities* for B.C.	O	O	O	O	O	O
e.) B.C. is well prepared for any threats related to climate change.	O	O	O	O	O	O
f.) B.C. will have to prepare for and adjust to the impacts of climate change	O	O	O	O	O	O
g.) Reducing greenhouse gases is all that is needed to avoid future climate change impacts.	O	O	O	O	O	O
h.) I believe climate change is caused in-part by human activities.	O	O	O	O	O	O

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Extreme weather events **and** long-term changes in climate **can negatively impact your** business area.

Please answer the following based on whether these extreme weather events or long-term changes in climate might negatively influence the **specific work you do, rather than your workplace.** For example, ***DO NOT*** conclude that flooding is a threat because it might make it difficult to get to work or flood your office building. ***DO*** conclude that flooding is a threat if *the content* of your work involves coping with a flood or may be sensitive to a flooding event.

2.) For each of the extreme weather events or long-term changes in climate listed below, please indicate the level of threat (i.e. negative impact) each event could present to your business area.

	1 = No threat at all 2= A small threat 3= A large threat DK – Don't Know/ No Opinion			
	1	**2**	**3**	**DK**
a.) A heavy rainfall event that causes localized flooding	O	O	O	O
b.) Persistent droughts during summer months	O	O	O	O
c.) Increase in sea level	O	O	O	O
d.) Accelerated coastal erosion	O	O	O	O
e.) Increased variability in stream flow and seasonal transitions, including earlier spring run off	O	O	O	O
f.) Increasing river temperatures	O	O	O	O
g.) Intense heat waves	O	O	O	O
h.) A particularly mild winter	O	O	O	O
i.) Increased frequency and severity of forest fires	O	O	O	O
j.) Shifts in species abundance and distribution	O	O	O	O
k.) Increased outbreaks of new and old pests	O	O	O	O
l.) Receding and thinning of glaciers	O	O	O	O

2b.) Are there any *other* extreme weather events and/or long-term changes in climate that could pose a *threat* to your business area?

_____

_____

_____

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3.) Please indicate your level of agreement with the following statement regarding your business area and extreme weather events and/or long-term changes in climate

	1=Strongly Disagree 2=Disagree 3=Neither Agree nor Disagree 4=Agree 5=Strongly Agree DK=Don't Know/No Opinion					
	1	**1**	**3**	**4**	**5**	**DK**
My business area works with clients and/or stakeholders that may be vulnerable to extreme weather and/or long-term changes in climate	O	O	O	O	O	O

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4) Are there any long-term changes in climate that would provide *opportunities* for your business area or any of your clients or stakeholders? An example of an opportunity could be changing recreational or agricultural opportunities due to a changing climate. [JP to provide]

- Yes *<go to 4b>*
- No *<skip to 5>*
- Don't Know *<skip to 5>*

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4b.) Please describe the potential *opportunities* provided to your business area, clients, or stakeholders by specific long-term changes in climate.

_____

_____

_____

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5.) Thinking about your business area, which statement best describes your business area's current position regarding the relevance of extreme weather events and/or long-term changes in climate to the work you do.

- We haven't thought about it *<go to 5b>*
- We have begun thinking about it *<go to 6>*
- We have assessed whether it is relevant to our work *<go to 6>*
- We are integrating it into our work where relevant *<go to 6>*
- Don't Know *<go to 6>*

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5b.) Again, thinking about your business area, do you think that extreme weather events and/or long-term changes in climate will have *any* relevance to the work you do?

- o Yes <go to 6>
- o No, it is not relevant to our business area <go to 8>

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6.) In general, how significant a priority is planning for extreme weather events and/or long-term changes in climate for your business area?

- o Not a priority <go to 6b>
- o A low priority <go to 6b>
- o A moderate priority < skip to 7>
- o A significant priority <skip to 7>
- o Don't Know <skip to 8>

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6b.) Please explain why extreme weather events and/or long-term changes in climate are *not* a priority for your business area.

_____

_____

_____

<skip to 8>

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7.) Please indicate your level of agreement with the following statements regarding planning for extreme weather events and/or long-term changes in climate

My business area takes extreme weather events and/or long-term changes in climate into account:

	1=Strongly Disagree 2=Disagree 3=Neither Agree nor Disagree 4=Agree 5=Strongly Agree DK=Don't Know NA – Not Applicable						
	1	**1**	**3**	**4**	**5**	**DK**	**NA**
a.) When making operational decisions.	O	O	O	O	O	O	O
b.) When developing policy	O	O	O	O	O	O	O
c.) When drafting or amending legislation and regulations	O	O	O	O	O	O	O
d.) When doing long-term planning	O	O	O	O	O	O	O
e.) When doing risk management planning.	O	O	O	O	O	O	O
f.) In the design and building of infrastructure.	O	O	O	O	O	O	O
g.) When reviewing or approving activities carried out by other individuals or organizations	O	O	O	O	O	O	O
h.) When financing projects carries out by other organizations	O	O	O	O	O	O	O

7b.) Please describe any *other* ways your business area takes into account extreme weather events and/or long-term changes in climate.

_____

_____

_____

8.) Over the past 12 months, has your business area been affected by any weather-related events? This can include warm winters, intense heat waves, extreme precipitation, flooding, etc.

Again, please answer based on the *content* of your work rather than your workplace. *DO NOT* answer "Yes" if flooding is a treat because it might make it hard to get to work. ***DO*** answer "Yes" if the content of your work was affected by a weather-related event. For example, if flooding affected the timeline or budget for a natural resource project.

- o Yes <go to 8b>
- o No <skip to 9 >

- Don't Know <skip to 9>

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8b.) Please describe this weather-related event and how it impacted your business area.

_____
_____
_____

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8c.) How significant was the impact of this weather-related event to your business area?

- Not at all significant
- A little significant
- Somewhat significant
- Significant
- Very significant
- Don't Know

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9.) Please indicate your level of agreement with the following statements related to attitudes and barriers when it comes to preparing for climate change in your business area.

	1=Strongly Disagree 2=Disagree 3=Neither Agree nor Disagree 4=Agree 5=Strongly Agree DK=Don't Know					
	1	**2**	**3**	**4**	**5**	**DK**
a.) It is not clear to me how climate change will affect the work I do.	O	O	O	O	O	O
b.) Considering climate change when developing or changing policy is too complex.	O	O	O	O	O	O
c.) There is not enough information about climate change and its potential impacts.	O	O	O	O	O	O
d.) My business area does not have the required expertise to identify and assess the potential impacts of climate change.	O	O	O	O	O	O
e.) There is too much uncertainty in the projections on what the future climate will be like to take action	O	O	O	O	O	O
f.) Preparing for climate change is not an organizational priority.	O	O	O	O	O	O

g.) My business area would think more about preparing for climate change if we could demonstrate that it would save us money in the long-run.	O	O	O	O	O	O
h.) Short-term financial costs prohibit action on climate change in my business area.	O	O	O	O	O	O

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10.) Please indicate how useful the following tools and resources are to help your business area assess and prepare for climate change.

	1=Not at all useful 2=Slightly useful 3=Somewhat useful 4=Useful 5=Very Useful DK=Don't Know					
	1	**2**	**3**	**4**	**5**	**DK**
a.) Funding to help identify or address climate change impacts.	O	O	O	O	O	O
b.) General information about the effects of climate change in B.C.	O	O	O	O	O	O
c.) Information about how climate change is relevant to my business area.	O	O	O	O	O	O
d.) Improved access to expertise or expert consultation.	O	O	O	O	O	O
e.) Improved real-time monitoring of climate and climate-sensitive variables	O	O	O	O	O	O
f.) Policy frameworks to help guide decision making.	O	O	O	O	O	O
g.) Case studies outlining what others have done to assess and prepare for climate change impacts.	O	O	O	O	O	O
h.) Government-wide policy that directs Ministries to prepare for climate change impacts.	O	O	O	O	O	O

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11.) Are you familiar with the BC Government's Climate Change Adaptation Strategy

- o Yes
- o No

12.) Are you familiar with the "Climate Change 101" courses offered by the PSA?

- o Yes
- o No

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Your contribution is much appreciated. Thank you.

Please click the Submit button (at the bottom left) to complete your survey.

Questions?

If you have any questions about the survey, please contact the BC Stats Survey Administrator:

By phone: (250)356-7982
By email: BCStats.SurveyMail3@gov.bc.ca

Climate Change Resources:

For more information on climate impact and action go to:

The Climate Action Secretariats Adaptation page to learn more about what government is doing on adaptation and see the BC Government's Climate Change Adaptation Strategy

The LiveSmart BC website to learn about how people can take action on climate change

Plan2Adapt to see how the climate is changing in BC

Available courses on climate change through The Learning Center

APPENDIX C: TABLES

Results by Ministry

Please indicate your level of agreement with the following statements	Attorney General	Children & Family Development	Environment	Finance	Forests Lands Natural Res Ops	Health	Labour, Citizens Services &Open Gov	Public Safety & Sol Gen	Social Development	Transportation & Infrastructure	Education & Culture group	Other Resources group	Service & Economy group	BC Public Service Average
	(n=302)	(n=441)	(n=124)	(n=135)	(n=465)	(n=147)	(n=276)	(n=309)	(n=266)	(n=188)	(n=102)	(n=106)	(n=120)	(n=2981)
	% Agree													
1a.) The impacts of climate change are currently being felt around the world.	90.1%	94.1%	94.4%	89.6%	90.3%	91.2%	93.8%	88.0%	94.7%	87.8%	97.1%	87.7%	90.8%	91.5%
1b.) Climate change has already impacted B.C..	84.1%	91.2%	87.9%	81.5%	86.9%	86.4%	88.4%	86.1%	91.7%	84.6%	91.2%	87.7%	90.0%	87.7%
1h.) I believe climate change is caused in-part by human activities.	84.1%	89.1%	87.1%	81.5%	83.0%	91.8%	83.0%	83.5%	88.3%	83.5%	92.2%	79.2%	88.3%	85.5%
1f.) B.C. will have to prepare for and adjust to the impacts of climate change	81.1%	88.9%	90.3%	83.7%	86.9%	87.8%	82.2%	79.6%	88.3%	83.0%	90.2%	80.2%	89.2%	85.3%
1c.) Climate change impacts will pose future threats to B.C.	78.5%	81.2%	91.1%	79.3%	83.0%	78.9%	77.9%	75.4%	86.1%	78.2%	88.2%	74.5%	84.2%	80.9%
1d.) Climate change impacts will pose future opportunities for B.C.	51.0%	51.9%	60.5%	54.1%	58.9%	52.4%	56.5%	53.4%	56.0%	49.5%	55.9%	56.6%	62.5%	54.9%
	% Disagree													
1e.) B.C. is well prepared for any threats related to climate change.	40.1%	44.0%	59.7%	40.0%	52.0%	38.1%	37.0%	44.7%	47.0%	38.8%	45.1%	46.2%	46.7%	44.6%
1g.) Reducing greenhouse gases is all that is needed to avoid future climate change impacts.	65.9%	71.0%	83.1%	74.1%	77.2%	70.7%	73.6%	77.0%	73.7%	69.1%	78.4%	78.3%	78.3%	73.9%

Computed from 2a-l.	Attorney General	Children & Family Development	Environment	Finance	Forests Lands Natural Res Ops	Health	Labour,Citizens Services &Open Gov	Public Safety & Sol Gen	Social Development	Transportation & Infrastructure	Education & Culture group	Other Resources group	Service & Economy group	BC Public Service Average
	(n=302)	(n=441)	(n=124)	(n=135)	(n=465)	(n=147)	(n=276)	(n=309)	(n=266)	(n=188)	(n=102)	(n=106)	(n=120)	(n=2981)
Don't know any threats from list	3.0%	2.9%	1.6%	3.0%	1.7%	4.1%	2.2%	1.6%	3.0%	2.7%	8.8%	2.8%	4.2%	2.8%
No threats from list	23.2%	10.0%	10.5%	25.2%	6.2%	23.1%	21.4%	14.9%	7.9%	4.3%	14.7%	10.4%	29.2%	14.1%
At least one threat from list (less than 12)	54.6%	68.0%	43.5%	54.8%	68.6%	59.9%	63.4%	59.9%	64.7%	68.6%	60.8%	64.2%	44.2%	61.9%
All 12 threats from list	19.2%	19.0%	44.4%	17.0%	23.4%	12.9%	13.0%	23.6%	24.4%	24.5%	15.7%	22.6%	22.5%	21.3%

Please indicate the level of threat (i.e. negative impact) each event could present to your business area.	Attorney General	Children & Family Development	Environment	Finance	Forests Lands Natural Res Ops	Health	Labour,Citizens Services &Open Gov	Public Safety & Sol Gen	Social Development	Transportation & Infrastructure	Education & Culture group	Other Resources group	Service & Economy group	BC Public Service Average
	(n=302)	(n=441)	(n=124)	(n=135)	(n=465)	(n=147)	(n=276)	(n=309)	(n=266)	(n=188)	(n=102)	(n=106)	(n=120)	(n=2981)
	% Small or Large Threat													
2a.) A heavy rainfall event that causes localized flooding	59.9%	76.6%	80.6%	58.5%	78.9%	56.5%	65.9%	69.6%	78.6%	88.8%	63.7%	74.5%	59.2%	72%
2b.) Persistent droughts during summer months	46.0%	58.3%	79.0%	41.5%	82.6%	40.1%	47.8%	52.8%	64.3%	62.8%	44.1%	65.1%	45.8%	64%
2c.) Increase in sea level	47.7%	51.5%	69.4%	48.9%	43.7%	41.5%	48.6%	47.2%	59.4%	55.9%	57.8%	58.5%	48.3%	67%
2d.) Accelerated coastal erosion	43.0%	44.7%	66.1%	45.2%	43.0%	40.1%	40.9%	40.5%	54.1%	56.9%	44.1%	52.8%	47.5%	66%
2e.) Increased variability in stream flow and seasonal transitions, including earlier spring run off	41.4%	55.1%	76.6%	36.3%	74.0%	31.3%	43.8%	50.2%	62.4%	77.1%	38.2%	63.2%	40.8%	60%
2f.) Increasing river temperatures	39.1%	47.8%	72.6%	29.6%	59.4%	29.3%	33.3%	44.3%	48.9%	50.5%	27.5%	44.3%	40.0%	67%
2g.) Intense heat waves	56.0%	70.1%	77.4%	48.9%	78.9%	55.8%	57.2%	63.4%	72.6%	66.0%	50.0%	67.9%	54.2%	59%
2h.) A particularly mild winter	31.1%	41.5%	63.7%	27.4%	66.7%	22.4%	30.1%	39.8%	44.0%	56.4%	22.5%	48.1%	31.7%	64%
2i.) Increased frequency and severity of forest fires	53.0%	70.1%	75.0%	53.3%	86.5%	48.3%	57.6%	67.0%	72.6%	83.5%	55.9%	72.6%	53.3%	69%
2j.) Shifts in species abundance and distribution	38.4%	46.7%	71.0%	28.9%	67.7%	30.6%	37.0%	40.8%	45.9%	49.5%	34.3%	59.4%	35.0%	65%
2k.) Increased outbreaks of new and old pests	46.0%	60.1%	71.0%	40.7%	77.8%	51.0%	48.2%	54.4%	64.7%	63.3%	46.1%	70.8%	40.0%	64%
2l.) Receding and thinning of glaciers	37.4%	46.5%	65.3%	31.1%	52.7%	31.3%	33.0%	42.4%	48.1%	49.5%	31.4%	44.3%	39.2%	66%

3.) My business area works with clients and/or stakeholders that may be vulnerable to extreme weather and/or long-term changes in climate	Attorney General	Children & Family Development	Environment	Finance	Forests Lands Natural Res Ops	Health	Labour,Citizens Services &Open Gov	Public Safety & Sol Gen	Social Development	Transportation & Infrastructure	Education & Culture group	Other Resources group	Service & Economy group	BC Public Service Average
	(n=302)	(n=441)	(n=124)	(n=135)	(n=465)	(n=147)	(n=276)	(n=309)	(n=266)	(n=188)	(n=102)	(n=106)	(n=120)	(n=2981)
Don't Know	10.9%	6.8%	2.4%	7.4%	2.8%	12.2%	6.5%	5.8%	1.1%	5.3%	5.9%	.9%	8.3%	6%
Disagree	26.8%	16.8%	8.9%	20.0%	4.1%	22.4%	14.1%	23.0%	10.5%	3.2%	23.5%	7.5%	18.3%	15%
Neither Agree nor Disagree	18.9%	18.4%	7.3%	20.7%	7.5%	17.0%	21.4%	17.2%	8.6%	12.8%	11.8%	9.4%	13.3%	14%
Agree	43.4%	58.0%	81.5%	51.9%	85.6%	48.3%	58.0%	54.0%	79.7%	78.7%	58.8%	82.1%	60.0%	65%

4.) Are there any long-term changes in climate that would provide opportunities for your business area or any of your clients or stakeholders?	Attorney General	Children & Family Development	Environment	Finance	Forests Lands Natural Res Ops	Health	Labour,Citizens Services &Open Gov	Public Safety & Sol Gen	Social Development	Transportation & Infrastructure	Education & Culture group	Other Resources group	Service & Economy group	BC Public Service Average
	(n=302)	(n=441)	(n=124)	(n=135)	(n=465)	(n=147)	(n=276)	(n=309)	(n=266)	(n=188)	(n=102)	(n=106)	(n=120)	(n=2981)
Yes	6.6%	12.2%	41.9%	10.4%	46.5%	12.9%	19.6%	14.6%	22.9%	27.1%	21.6%	37.7%	25.0%	23%
No	47.4%	41.7%	12.1%	34.1%	8.0%	41.5%	31.5%	43.0%	25.9%	18.1%	31.4%	24.5%	30.8%	30%
Don't know	46.0%	46.0%	46.0%	55.6%	45.6%	45.6%	48.9%	42.4%	51.1%	54.8%	47.1%	37.7%	44.2%	47%

Which statement best describes your business area's current position regarding the relevance of extreme weather events and/or long-term changes in climate to the work you do? & Do you think that extreme weather events and/or long-term changes in climate will have any relevance to the work you do?														
Computed 5 & 5b	Attorney General	Children & Family Development	Environment	Finance	Forests Lands Natural Res Ops	Health	Labour,Citizens Services &Open Gov	Public Safety & Sol Gen	Social Development	Transportation & Infrastructure	Education & Culture group	Other Resources group	Service & Economy group	BC Public Service Average
	(n=302)	(n=441)	(n=124)	(n=135)	(n=465)	(n=147)	(n=276)	(n=309)	(n=266)	(n=188)	(n=102)	(n=106)	(n=120)	(n=2981)
Don't know	36.4%	23.8%	16.9%	37.8%	17.2%	32.0%	30.8%	31.1%	31.2%	25.0%	23.5%	23.6%	25.0%	27%
We haven't thought about it - it is NOT relevant to our business	29.8%	22.7%	2.4%	17.8%	5.8%	26.5%	22.5%	23.3%	12.4%	5.3%	25.5%	7.5%	27.5%	18%
We haven't thought about it - it may be relevant to our business	17.2%	23.8%	11.3%	17.0%	11.6%	15.0%	15.2%	13.3%	19.2%	13.8%	18.6%	26.4%	25.0%	17%
We have begun thinking about it	8.9%	15.2%	26.6%	13.3%	24.5%	14.3%	12.3%	12.9%	13.9%	16.0%	13.7%	13.2%	12.5%	16%
We have assessed whether it is relevant to our work.	3.0%	6.1%	9.7%	3.7%	8.8%	5.4%	5.4%	6.5%	5.3%	10.6%	3.9%	4.7%	5.0%	6%
We are integrating it into our work where relevant	4.6%	8.4%	33.1%	10.4%	32.0%	6.8%	13.8%	12.9%	18.0%	29.3%	14.7%	24.5%	5.0%	17%

6.) *In general, how significant a priority is planning for extreme weather events and/or long-term changes in climate for your business area?*	Attorney General	Children & Family Development	Environment	Finance	Forests Lands Natural Res Ops	Health	Labour,Citizens Services &Open Gov	Public Safety & Sol Gen	Social Development	Transportation & Infrastructure	Education & Culture group	Other Resources group	Service & Economy group	BC Public Service Average
	(n=302)	(n=441)	(n=124)	(n=135)	(n=465)	(n=147)	(n=276)	(n=309)	(n=266)	(n=188)	(n=102)	(n=106)	(n=120)	(n=2981)
Don't know	23.6%	17.3%	12.4%	21.6%	11.2%	26.9%	22.0%	19.8%	21.0%	12.9%	22.4%	19.4%	18.4%	18%
Not a priority	28.8%	18.8%	12.4%	24.3%	11.6%	22.2%	15.4%	15.2%	10.3%	7.3%	18.4%	19.4%	31.0%	17%
A low priority	19.3%	31.7%	22.3%	28.8%	22.1%	22.2%	28.5%	20.3%	18.9%	13.5%	28.9%	22.4%	27.6%	23%
A moderate priority	17.0%	21.4%	38.0%	18.9%	29.2%	21.3%	24.8%	26.6%	27.5%	34.3%	19.7%	20.4%	17.2%	25%
A significant priority	11.3%	10.9%	14.9%	6.3%	25.8%	7.4%	9.3%	18.1%	22.3%	32.0%	10.5%	18.4%	5.7%	17%

Please indicate your level of agreement with the following statements	Attorney General	Children & Family Development	Environment	Finance	Forests Lands Natural Res Ops	Health	Labour,Citizens Services &Open Gov	Public Safety & Sol Gen	Social Development	Transportation & Infrastructure	Education & Culture group	Other Resources group	Service & Economy group	BC Public Service Average
	(n=302)	(n=441)	(n=124)	(n=135)	(n=465)	(n=147)	(n=276)	(n=309)	(n=266)	(n=188)	(n=102)	(n=106)	(n=120)	(n=2981)
	% Agree													
7a.) When making operational decisions.	25.0%	34.4%	54.2%	31.7%	54.8%	45.5%	41.1%	50.0%	48.8%	64.6%	31.0%	38.1%	40.0%	47%
7b.) When developing policy.	17.6%	23.6%	49.3%	37.5%	48.6%	24.2%	29.2%	36.4%	32.0%	46.4%	36.7%	45.2%	30.0%	37%
7c.) When drafting or amending legislation and regulations	12.5%	12.2%	41.8%	23.7%	36.7%	22.6%	13.3%	27.2%	15.4%	23.7%	32.1%	29.3%	21.4%	25%
7d.) When doing long-term planning.	15.4%	27.9%	54.1%	35.7%	56.7%	41.2%	40.9%	38.7%	33.3%	55.6%	48.4%	43.2%	36.7%	42%
7e.) When doing risk management planning.	32.5%	43.3%	61.1%	45.2%	56.5%	50.0%	61.1%	54.0%	47.7%	66.9%	51.7%	57.1%	55.2%	53%
7f.) In the design and building of infrastructure.	21.6%	19.7%	55.0%	17.1%	33.8%	45.7%	41.2%	35.0%	18.3%	62.7%	44.0%	21.1%	34.6%	34%
7g.) When reviewing or approving activities carried out by other individuals or organizations.	14.9%	28.8%	45.8%	30.0%	42.9%	23.5%	41.1%	36.1%	31.0%	48.4%	37.9%	30.0%	44.8%	37%
7h.) When financing projects carries out by other organizations.	11.1%	18.8%	22.2%	20.6%	21.7%	21.2%	22.0%	23.5%	22.9%	29.9%	33.3%	15.8%	33.3%	22%

8.) Over the past 12 months, has your business area been affected by any weather-related events?	Attorney General	Children & Family Development	Environment	Finance	Forests Lands Natural Res Ops	Health	Labour,Citizens Services &Open Gov	Public Safety & Sol Gen	Social Development	Transportation & Infrastructure	Education & Culture group	Other Resources group	Service & Economy group	BC Public Service Average
	(n=302)	(n=441)	(n=124)	(n=135)	(n=465)	(n=147)	(n=276)	(n=309)	(n=266)	(n=188)	(n=102)	(n=106)	(n=120)	(n=2981)
Yes	15.2%	20.0%	43.5%	12.6%	51.4%	14.3%	17.4%	26.2%	39.5%	63.8%	21.6%	34.0%	14.2%	30%
No	71.5%	65.5%	37.9%	71.1%	35.5%	67.3%	67.0%	59.2%	45.9%	25.5%	65.7%	50.0%	68.3%	55%
Don't know	13.2%	14.5%	18.5%	16.3%	13.1%	18.4%	15.6%	14.6%	14.7%	10.6%	12.7%	16.0%	17.5%	15%

8b.) How significant was the impact of this weather-related event to your business are?	Attorney General	Children & Family Development	Environment	Finance	Forests Lands Natural Res Ops	Health	Labour,Citizens Services &Open Gov	Public Safety & Sol Gen	Social Development	Transportation & Infrastructure	Education & Culture group	Other Resources group	Service & Economy group	BC Public Service Average
	(n=302)	(n=441)	(n=124)	(n=135)	(n=465)	(n=147)	(n=276)	(n=309)	(n=266)	(n=188)	(n=102)	(n=106)	(n=120)	(n=2981)
Not at all significant	4.3%	1.1%	.0%	17.6%	1.3%	.0%	6.4%	2.5%	.9%	.8%	13.6%	.0%	11.8%	2%
A little significant	26.1%	30.7%	11.3%	29.4%	10.9%	33.3%	31.9%	25.9%	16.0%	10.0%	40.9%	11.1%	47.1%	19%
Somewhat significant	34.8%	43.2%	49.1%	47.1%	30.5%	19.0%	34.0%	43.2%	39.6%	24.2%	27.3%	50.0%	29.4%	35%
Significant	21.7%	14.8%	18.9%	5.9%	32.6%	33.3%	23.4%	13.6%	26.4%	28.3%	13.6%	25.0%	5.9%	24%
Very significant	6.5%	10.2%	18.9%	.0%	22.6%	9.5%	4.3%	13.6%	14.2%	35.8%	.0%	11.1%	5.9%	17%
Don't know	6.5%	.0%	1.9%	.0%	2.1%	4.8%	.0%	1.2%	2.8%	.8%	4.5%	2.8%	.0%	2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100%

**Note that due to skip patterns in the questionnaire the sample sizes of the following groups are small and results should be interpreted with caution: Attorney General, Finance, Health, Labour, Citizens Services & Open Government, Education & Culture group, Other Resources group, and Service & Economy group.

Please indicate your level of agreement with the following statements	Attorney General	Children & Family Development	Environment	Finance	Forests Lands Natural Res Ops	Health	Labour,Citizens Services &Open Gov	Public Safety & Sol Gen	Social Development	Transportation & Infrastructure	Education & Culture group	Other Resources group	Service & Economy group	BC Public Service Average
	(n=302)	(n=441)	(n=124)	(n=135)	(n=465)	(n=147)	(n=276)	(n=309)	(n=266)	(n=188)	(n=102)	(n=106)	(n=120)	(n=2981)
	% Agree													
9a.) It is not clear to me how climate change will affect the work I do.	50.3%	57.1%	38.2%	51.1%	38.2%	59.4%	52.9%	51.6%	48.5%	32.6%	57.4%	42.9%	59.3%	48.8%
9b.) Considering climate change when developing or changing policy is too complex.	11.0%	15.1%	15.4%	14.9%	19.3%	11.2%	9.2%	11.4%	13.6%	13.9%	12.9%	19.0%	10.2%	13.9%
9c.) There is not enough information about climate change and its potential impacts.	45.0%	41.3%	35.0%	43.3%	41.6%	46.9%	35.7%	40.6%	48.1%	41.2%	39.6%	44.8%	40.7%	41.9%
9d.) My business area does not have the required expertise to identify and asses the potential impacts of climate change.	44.7%	50.2%	26.8%	42.1%	42.3%	49.7%	37.1%	39.6%	43.9%	29.4%	44.6%	41.0%	54.2%	42.5%
9e.) There is too much uncertainty in the projections on what the future climate will be like to take action.	32.0%	27.4%	22.8%	43.3%	39.9%	37.8%	30.1%	35.1%	32.6%	29.9%	30.7%	38.1%	36.4%	33.4%
9f.) Preparing for climate change is not an organizational priority.	49.7%	50.7%	24.4%	45.5%	31.9%	51.7%	41.2%	44.5%	44.7%	25.1%	48.5%	41.9%	50.8%	42.3%
9g.) My business area would think more about preparing for climate change if we could demonstrate that it would save us money in the long-run.	32.3%	37.9%	27.6%	37.6%	28.6%	38.5%	40.1%	34.1%	45.8%	40.6%	30.7%	30.5%	31.4%	35.4%
9h.) Short-term financial costs prohibit action on climate change in my business area.	19.3%	22.8%	30.1%	17.3%	25.6%	20.3%	21.3%	18.8%	21.6%	23.0%	16.8%	21.0%	15.3%	21.6%

Please indicate how useful the following tools and resources are to help your business area assess and prepare for climate change.	Attorney General	Children & Family Development	Environment	Finance	Forests Lands Natural Res Ops	Health	Labour,Citizens Services &Open Gov	Public Safety & Sol Gen	Social Development	Transportation & Infrastructure	Education & Culture group	Other Resources group	Service & Economy group	BC Public Service Average
	(n=302)	(n=441)	(n=124)	(n=135)	(n=465)	(n=147)	(n=276)	(n=309)	(n=266)	(n=188)	(n=102)	(n=106)	(n=120)	(n=2981)
	% Useful or Very Useful													
10a.) Funding to help identify or address climate change impacts.	30.7%	34.3%	57.4%	25.0%	51.4%	37.8%	33.6%	34.7%	43.9%	51.9%	39.6%	47.6%	33.3%	40%
10b.) General information about the effects of climate change in B.C..	44.3%	56.5%	61.5%	48.5%	54.2%	52.4%	49.4%	48.4%	63.0%	55.1%	47.5%	45.7%	53.0%	53%
10c.) Information about how climate change is relevant to my business area.	52.3%	66.4%	76.2%	58.3%	66.9%	74.8%	65.3%	57.1%	71.0%	67.9%	66.3%	60.0%	65.0%	65%
10d.) Improved access to expertise or expert consultation.	35.7%	48.2%	67.2%	40.9%	59.5%	46.9%	45.4%	42.2%	56.1%	53.5%	50.5%	46.7%	49.6%	49%
10e.) Improved real-time monitoring of climate and climate-sensitive variables.	31.3%	42.6%	63.1%	30.3%	57.1%	40.6%	36.9%	39.6%	49.2%	56.1%	34.7%	42.9%	36.8%	44%
10f.) Policy frameworks to help guide decision making.	32.7%	41.5%	54.9%	41.7%	51.9%	46.9%	49.1%	41.6%	54.2%	46.5%	48.5%	46.7%	43.6%	46%
10g.) Case studies outlining what others have done to assess and prepare for climate change impacts.	37.3%	53.9%	66.4%	45.5%	55.6%	51.7%	56.1%	51.3%	61.5%	54.5%	58.4%	49.5%	58.1%	52%
10h.) Government-wide policy that directs Ministries to prepare for climate change impacts.	43.0%	53.2%	57.4%	42.4%	53.2%	57.3%	55.0%	47.7%	65.3%	49.7%	45.5%	44.8%	54.7%	52%

11.) Are you familiar with the BC Government's Climate Change Adaptation Strategy?	Attorney General	Children & Family Development	Environment	Finance	Forests Lands Natural Res Ops	Health	Labour,Citizens Services &Open Gov	Public Safety & Sol Gen	Social Development	Transportation & Infrastructure	Education & Culture group	Other Resources group	Service & Economy group	BC Public Service Average
	(n=302)	(n=441)	(n=124)	(n=135)	(n=465)	(n=147)	(n=276)	(n=309)	(n=266)	(n=188)	(n=102)	(n=106)	(n=120)	(n=2981)
Yes	6.7%	6.5%	38.5%	9.8%	29.6%	7.7%	7.7%	9.1%	10.3%	16.1%	18.0%	19.0%	19%	14%
No	93.3%	93.5%	61.5%	90.2%	70.4%	92.3%	92.3%	90.9%	89.7%	83.9%	82.0%	81.0%	81%	86%

12.) *Are you familiar with the "Climate Change 101" courses offered by the PSA?*	Attorney General	Children & Family Development	Environment	Finance	Forests Lands Natural Res Ops	Health	Labour,Citizens Services &Open Gov	Public Safety & Sol Gen	Social Development	Transportation & Infrastructure	Education & Culture group	Other Resources group	Service & Economy group	BC Public Service Average
	(n=302)	(n=441)	(n=124)	(n=135)	(n=465)	(n=147)	(n=276)	(n=309)	(n=266)	(n=188)	(n=102)	(n=106)	(n=120)	(n=2981)
Yes	5.0%	3.7%	21.3%	10.6%	19.6%	7.0%	7.4%	5.9%	8.8%	11.8%	13.0%	19.0%	26%	11%
No	95.0%	96.3%	78.7%	89.4%	80.4%	93.0%	92.6%	94.1%	91.2%	88.2%	87.0%	81.0%	74%	89%

Results by Job Classification

Note: Categories highlighted in grey have extremely small sample sizes and should be excluded from any analysis.

Please indicate your level of agreement with the following statements	Administrative Support	Applied Leadership	Business and Strategic Leadership	Enforcement & Corrections	Finance & Economics	Health, Education & Social Work	Information Technology	Legal Counsel	Science & Technical Officers	Senior Administration & Research	Trades & Operations	Public Service Average
	(n=605)	(n=140)	(n=388)	(n=180)	(n=119)	(n=444)	(n=145)	(n=74)	(n=435)	(n=436)	(n=15)	(n=2981)
	% Agree											
1a.) The impacts of climate change are currently being felt around the world.	92.7%	95.0%	89.7%	85.6%	95.0%	94.1%	93.8%	85.1%	88.0%	92.7%	100.0%	91.5%
1b.) Climate change has already impacted B.C..	87.3%	90.0%	86.6%	85.0%	90.8%	92.3%	85.5%	78.4%	85.1%	88.3%	100.0%	87.7%
1h.) I believe climate change is caused in-part by human activities.	85.6%	90.7%	83.8%	76.1%	80.7%	89.9%	87.6%	79.7%	82.5%	89.2%	86.7%	85.5%
1f.) B.C. will have to prepare for and adjust to the impacts of climate change	87.3%	85.7%	85.8%	77.8%	84.9%	86.3%	86.9%	73.0%	85.3%	85.3%	100.0%	85.3%
1c.) Climate change impacts will pose future threats to B.C.	78.3%	87.9%	83.2%	70.6%	80.7%	81.3%	78.6%	74.3%	83.4%	82.8%	93.3%	80.9%
1d.) Climate change impacts will pose future opportunities for B.C.	49.6%	58.6%	61.9%	47.2%	52.1%	52.9%	54.5%	51.4%	59.5%	57.6%	40.0%	54.9%
	% Disagree											
1e.) B.C. is well prepared for any threats related to climate change.	33.2%	40.7%	47.9%	44.4%	36.1%	48.2%	47.6%	39.2%	55.4%	46.3%	53.3%	44.6%
1g.) Reducing greenhouse gases is all that is needed to avoid future climate change impacts.	66.4%	77.1%	76.8%	72.2%	70.6%	71.8%	78.6%	73.0%	78.9%	77.5%	80.0%	73.9%

Computed from 2a-l	Administrative Support	Applied Leadership	Business and Strategic Leadership	Enforcement & Corrections	Finance & Economics	Health, Education & Social Work	Information Technology	Legal Counsel	Science & Technical Officers	Senior Administration & Research	Trades & Operations	BC Public Service Average
	(n=605)	(n=140)	(n=388)	(n=180)	(n=119)	(n=444)	(n=145)	(n=74)	(n=435)	(n=436)	(n=15)	(n=2981)
Don't know any threats from list	4.3%	1.4%	1.8%	1.7%	4.2%	3.2%	4.1%	4.1%	.7%	3.2%	.0%	2.8%
No threats from list	18.7%	22.9%	15.7%	3.3%	24.4%	8.6%	23.4%	28.4%	2.1%	17.2%	6.7%	14.1%
At least one threat from list (less than 12)	56.4%	60.7%	63.4%	59.4%	58.0%	66.2%	60.7%	58.1%	66.9%	62.4%	53.3%	61.9%
All 12 threats from list	20.7%	15.0%	19.1%	35.6%	13.4%	22.1%	11.7%	9.5%	30.3%	17.2%	40.0%	21.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Please indicate the level of threat (i.e. negative impact) each event could present to your business area.	Administrative Support	Applied Leadership	Business and Strategic Leadership	Enforcement & Corrections	Finance & Economics	Health, Education & Social Work	Information Technology	Legal Counsel	Science & Technical Officers	Senior Administration & Research	Trades & Operations	BC Public Service Average
	(n=605)	(n=140)	(n=388)	(n=180)	(n=119)	(n=444)	(n=145)	(n=74)	(n=435)	(n=436)	(n=15)	(n=2981)
	% Small or Large Threat											
2a.) A heavy rainfall event that causes localized flooding	64.6%	66.4%	70.1%	79.4%	59.7%	80.0%	54.5%	56.8%	88.3%	67.2%	86.7%	71.7%
2b.) Persistent droughts during summer months	53.9%	53.6%	52.8%	66.1%	39.5%	62.2%	37.9%	39.2%	86.2%	52.3%	73.3%	63.7%
2c.) Increase in sea level	46.0%	42.9%	52.1%	58.9%	41.2%	54.5%	47.6%	39.2%	53.3%	53.2%	66.7%	66.6%
2d.) Accelerated coastal erosion	42.6%	42.1%	44.6%	51.1%	37.8%	50.2%	43.4%	35.1%	52.0%	46.3%	60.0%	66.5%
2e.) Increased variability in stream flow and seasonal transitions	46.1%	46.4%	53.6%	64.4%	34.5%	58.6%	37.2%	37.8%	86.4%	47.5%	66.7%	59.7%
2f.) Increasing river temperatures	42.3%	36.4%	40.7%	55.6%	29.4%	51.4%	27.6%	33.8%	67.1%	36.7%	66.7%	67.1%
2g.) Intense heat waves	58.7%	62.1%	64.4%	80.0%	49.6%	72.3%	43.4%	44.6%	83.9%	59.6%	73.3%	59.2%
2h.) A particularly mild winter	40.2%	31.4%	39.4%	57.2%	27.7%	43.7%	22.1%	20.3%	70.6%	33.0%	60.0%	64.3%
2i.) Increased frequency and severity of forest fires	59.5%	57.1%	66.2%	81.7%	59.7%	72.3%	49.0%	48.6%	89.9%	63.1%	80.0%	68.7%
2j.) Shifts in species abundance and distribution	44.0%	40.0%	40.5%	54.4%	33.6%	48.4%	29.0%	32.4%	73.1%	38.1%	66.7%	64.5%
2k.)Increased outbreaks of new and old pests	52.9%	52.1%	51.8%	70.0%	44.5%	63.3%	42.1%	37.8%	83.0%	52.8%	80.0%	64.0%
2l.) Receding and thinning of glaciers	40.7%	32.9%	38.9%	54.4%	31.9%	49.5%	29.0%	31.1%	59.5%	38.5%	66.7%	66.4%

3. My business area works with clients and/or stakeholders that may be vulnerable to extreme weather and/or long-term changes in climate	Administrative Support	Applied Leadership	Business and Strategic Leadership	Enforcement & Corrections	Finance & Economics	Health, Education & Social Work	Information Technology	Legal Counsel	Science & Technical Officers	Senior Administration & Research	Trades & Operations	BC Public Service Average
	(n=605)	(n=140)	(n=388)	(n=180)	(n=119)	(n=444)	(n=145)	(n=74)	(n=435)	(n=436)	(n=15)	(n=2981)
Don't Know	13.1%	6.4%	1.0%	6.1%	9.2%	5.4%	4.1%	5.4%	2.1%	3.4%	6.7%	5.8%
Disagree	14.7%	23.6%	16.0%	20.0%	16.8%	13.1%	12.4%	37.8%	5.1%	17.7%	.0%	14.9%
Neither Agree nor Disagree	17.4%	16.4%	15.5%	16.1%	14.3%	15.3%	18.6%	14.9%	7.6%	13.3%	6.7%	14.5%
Agree	54.9%	53.6%	67.5%	57.8%	59.7%	66.2%	64.8%	41.9%	85.3%	65.6%	86.7%	64.8%

4. Are there any long-term changes in climate that would provide opportunities for your business area or any of your clients or stakeholders?	Administrative Support	Applied Leadership	Business and Strategic Leadership	Enforcement & Corrections	Finance & Economics	Health, Education & Social Work	Information Technology	Legal Counsel	Science & Technical Officers	Senior Administration & Research	Trades & Operations	BC Public Service Average
	(n=605)	(n=140)	(n=388)	(n=180)	(n=119)	(n=444)	(n=145)	(n=74)	(n=435)	(n=436)	(n=15)	(n=2981)
Yes	12.1%	13.6%	24.2%	22.2%	17.6%	17.1%	20.7%	8.1%	48.5%	23.6%	33.3%	22.7%
No	28.1%	45.0%	33.2%	38.9%	27.7%	34.0%	35.2%	59.5%	12.2%	31.7%	13.3%	30.3%
Don't know	59.8%	41.4%	42.5%	38.9%	54.6%	48.9%	44.1%	32.4%	39.3%	44.7%	53.3%	46.9%

Which statement best describes your business area's current position regarding the relevance of extreme weather events and/or long-term changes in climate to the work you do? & Do you think that extreme weather events and/or long-term changes in climate will have any relevance to the work you do?												
Computed 5 & 5b	Administrative Support	Applied Leadership	Business and Strategic Leadership	Enforcement & Corrections	Finance & Economics	Health, Education & Social Work	Information Technology	Legal Counsel	Science & Technical Officers	Senior Administration & Research	Trades & Operations	BC Public Service Average
	(n=605)	(n=140)	(n=388)	(n=180)	(n=119)	(n=444)	(n=145)	(n=74)	(n=435)	(n=436)	(n=15)	(n=2981)
Don't know	41.3%	21.4%	13.7%	31.7%	36.1%	28.8%	33.1%	31.1%	12.2%	26.8%	13.3%	27.0%
We haven't thought about it - it is NOT relevant to our business	20.8%	26.4%	18.0%	18.9%	22.7%	16.7%	19.3%	33.8%	3.2%	21.1%	.0%	17.7%
We haven't thought about it - it may be relevant to our business	11.2%	20.0%	16.8%	16.7%	12.6%	23.6%	15.9%	23.0%	12.4%	19.7%	53.3%	17.0%
We have begun thinking about it	9.1%	8.6%	18.8%	15.6%	11.8%	16.7%	13.1%	2.7%	27.6%	14.7%	20.0%	15.6%
We have assessed whether it is relevant to our work.	6.0%	7.9%	8.0%	7.8%	3.4%	4.5%	6.2%	4.1%	10.1%	3.2%	.0%	6.2%
We are integrating it into our work where relevant	11.6%	15.7%	22.7%	9.4%	13.4%	9.7%	12.4%	5.4%	34.5%	14.4%	13.3%	16.5%

6.) In general, how significant a priority is planning for extreme weather events and/or long-term changes in climate for your business area?	Administrative Support	Applied Leadership	Business and Strategic Leadership	Enforcement & Corrections	Finance & Economics	Health, Education & Social Work	Information Technology	Legal Counsel	Science & Technical Officers	Senior Administration & Research	Trades & Operations	BC Public Service Average
	(n=605)	(n=140)	(n=388)	(n=180)	(n=119)	(n=444)	(n=145)	(n=74)	(n=435)	(n=436)	(n=15)	(n=2981)
Don't know	29.6%	12.6%	6.0%	17.1%	29.3%	19.5%	29.9%	26.5%	5.9%	20.3%	20.0%	18.1%
Not a priority	12.9%	23.3%	16.6%	16.4%	15.2%	17.8%	20.5%	42.9%	11.6%	18.3%	13.3%	16.6%
A low priority	15.7%	24.3%	32.1%	21.9%	26.1%	25.1%	19.7%	16.3%	22.1%	28.5%	6.7%	23.4%
A moderate priority	24.2%	26.2%	28.3%	24.7%	21.7%	22.4%	23.1%	12.2%	34.0%	19.5%	20.0%	25.2%
A significant priority	17.5%	13.6%	15.1%	19.9%	7.6%	15.1%	6.8%	2.0%	26.4%	13.4%	40.0%	16.7%

Please indicate your level of agreement with the following statements	Administrative Support	Applied Leadership	Business and Strategic Leadership	Enforcement & Corrections	Finance & Economics	Health, Education & Social Work	Information Technology	Legal Counsel	Science & Technical Officers	Senior Administration & Research	Trades & Operations	BC Public Service Average
	(n=605)	(n=140)	(n=388)	(n=180)	(n=119)	(n=444)	(n=145)	(n=74)	(n=435)	(n=436)	(n=15)	(n=2981)
	% Agree											
7a.) When making operational decisions.	37.4%	45.1%	55.4%	57.5%	39.4%	40.8%	44.2%	11.1%	54.8%	42.2%	33.3%	46.6%
7b.) When developing policy.	28.6%	34.0%	46.8%	36.5%	33.3%	24.3%	31.7%	11.1%	49.8%	33.1%	25.0%	37.0%
7c.) When drafting or amending legislation and regulations	20.8%	20.5%	28.1%	27.5%	16.7%	12.5%	15.8%	10.0%	36.5%	23.0%	25.0%	24.5%
7d.) When doing long-term planning.	36.2%	38.8%	51.8%	34.2%	45.5%	26.2%	51.2%	.0%	55.6%	41.6%	22.2%	42.5%
7e.) When doing risk management planning.	43.7%	64.0%	65.7%	52.0%	48.4%	44.6%	55.8%	18.2%	60.1%	52.1%	22.2%	53.2%
7f.) In the design and building of infrastructure.	29.8%	34.0%	51.9%	35.1%	27.6%	13.4%	54.8%	.0%	42.1%	34.1%	22.2%	34.4%
7g.) When reviewing or approving activities carried out by other individuals or organizations.	32.6%	41.7%	43.2%	42.7%	25.0%	24.6%	26.2%	.0%	47.2%	33.3%	22.2%	36.5%
7h.) h.) When financing projects carries out by other organizations.	21.8%	27.3%	22.0%	32.9%	22.6%	16.6%	18.4%	.0%	22.8%	25.0%	.0%	22.1%

8.) Over the past 12 months, has your business area been affected by any weather-related events?	Administrative Support	Applied Leadership	Business and Strategic Leaders	Enforcement & Corrections	Finance & Economics	Health, Education & Social Wor	Information Technology	Legal Counsel	Science & Technical Officers	Senior Administration & Research	Trades & Operations	BC Public Service Average
	(n=605)	(n=140)	(n=388)	(n=180)	(n=119)	(n=444)	(n=145)	(n=74)	(n=435)	(n=436)	(n=15)	(n=2981)
Yes	19.0%	20.0%	27.6%	32.8%	19.3%	30.6%	15.2%	12.2%	60.5%	28.4%	53.3%	30.0%
No	61.0%	68.6%	60.6%	51.7%	67.2%	53.2%	68.3%	79.7%	29.0%	58.3%	33.3%	55.4%
Don't know	20.0%	11.4%	11.9%	15.6%	13.4%	16.2%	16.6%	8.1%	10.6%	13.3%	13.3%	14.6%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

8b.) How significant was the impact of this weather-related event to your business are?	Administrative Support	Applied Leadership	Business and Strategic Leaders	Enforcement & Corrections	Finance & Economics	Health, Education & Social Wor	Information Technology	Legal Counsel	Science & Technical Officers	Senior Administration & Research	Trades & Operations	BC Public Service Average
	(n=605)	(n=140)	(n=388)	(n=180)	(n=119)	(n=444)	(n=145)	(n=74)	(n=435)	(n=436)	(n=15)	(n=2981)
Not at all significant	1.8%	10.7%	8.5%	.0%	.0%	.7%	.0%	.0%	1.1%	2.4%	.0%	2.4%
A little significant	14.9%	35.7%	25.5%	32.2%	17.4%	20.6%	36.4%	55.6%	9.5%	20.8%	.0%	18.9%
Somewhat significant	36.8%	28.6%	35.8%	44.1%	39.1%	36.8%	31.8%	22.2%	30.0%	41.6%	37.5%	35.4%
Significant	20.2%	14.3%	17.9%	15.3%	21.7%	28.7%	27.3%	11.1%	30.8%	21.6%	25.0%	24.2%
Very significant	18.4%	10.7%	12.3%	8.5%	17.4%	11.8%	4.5%	.0%	27.8%	12.0%	37.5%	17.2%
Don't know	7.9%	.0%	.0%	.0%	4.3%	1.5%	.0%	11.1%	.8%	1.9%	.0%	1.9%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

**Note that due to skip patterns in the questionnaire the sample sizes of the following groups are small and results should be interpreted with caution: Applied Leadership, Finance & Economics, Information Technology, Legal Counsel and Trades & Operations

Please indicate your level of agreement with the following statements	Administrative Support	Applied Leadership	Business and Strategic Leadership	Enforcement & Corrections	Finance & Economics	Health, Education & Social Work	Information Technology	Legal Counsel	Science & Technical Officers	Senior Administration & Research	Trades & Operations	BC Public Service Average
	(n=605)	(n=140)	(n=388)	(n=180)	(n=119)	(n=444)	(n=145)	(n=74)	(n=435)	(n=436)	(n=15)	(n=2981)
	% Agree											
9a.) It is not clear to me how climate change will affect the work I do.	52.8%	52.5%	48.4%	47.8%	48.7%	55.1%	59.9%	55.4%	30.9%	50.7%	26.7%	48.8%
9b.) Considering climate change when developing or changing policy is too complex.	11.4%	11.5%	14.9%	15.6%	11.9%	10.9%	13.4%	13.5%	20.5%	13.6%	13.3%	13.9%
9c.) There is not enough information about climate change and its potential impacts.	38.9%	40.3%	45.8%	44.4%	37.3%	43.1%	33.1%	47.3%	43.3%	43.1%	26.7%	41.9%
9d.) My business area does not have the required expertise to identify and asses the potential impacts of climate change.	32.3%	50.4%	46.9%	43.9%	40.2%	47.8%	36.6%	51.4%	40.6%	47.7%	26.7%	42.5%
9e.) There is too much uncertainty in the projections on what the future climate will be like to take action.	30.0%	38.8%	40.1%	45.6%	30.5%	24.1%	29.6%	33.8%	37.8%	32.3%	33.3%	33.4%
9f.) Preparing for climate change is not an organizational priority.	31.0%	49.6%	50.3%	44.4%	41.5%	48.7%	47.9%	59.5%	33.4%	46.1%	26.7%	42.3%
9g.) My business area would think more about preparing for climate change if we could demonstrate that it would save us money in the long-run.	25.5%	34.5%	36.9%	44.4%	33.3%	43.7%	41.5%	33.8%	33.6%	36.6%	26.7%	35.4%
9h.) Short-term financial costs prohibit action on climate change in my business area.	13.6%	14.4%	21.2%	23.9%	20.5%	24.4%	29.6%	13.5%	30.6%	21.7%	20.0%	21.6%

Please indicate how useful the following tools and resources are to help your business area assess and prepare for climate change.	Administrative Support	Applied Leadership	Business and Strategic Leadership	Enforcement & Corrections	Finance & Economics	Health, Education & Social Work	Information Technology	Legal Counsel	Science & Technical Officers	Senior Administration & Research	Trades & Operations	BC Public Service Average
	(n=605)	(n=140)	(n=388)	(n=180)	(n=119)	(n=444)	(n=145)	(n=74)	(n=435)	(n=436)	(n=15)	(n=2981)
	% Useful or Very Useful											
10a.) Funding to help identify or address climate change impacts.	37.8%	30.4%	38.0%	41.1%	34.2%	37.1%	36.9%	17.6%	54.7%	40.7%	53.3%	39.9%
10b.) General information about the effects of climate change in B.C..	53.9%	48.6%	50.4%	51.1%	49.6%	58.6%	51.8%	24.3%	56.8%	50.9%	53.3%	52.7%
10c.) Information about how climate change is relevant to my business area.	62.0%	65.9%	66.5%	58.9%	61.5%	66.1%	66.0%	43.2%	68.8%	67.4%	53.3%	64.6%
10d.) Improved access to expertise or expert consultation.	45.0%	44.9%	51.2%	43.3%	41.9%	50.6%	42.6%	24.3%	61.4%	52.1%	60.0%	49.3%
10e.) Improved real-time monitoring of climate and climate-sensitive variables.	42.7%	35.5%	36.7%	42.2%	30.8%	46.2%	34.8%	18.9%	61.2%	46.5%	66.7%	44.0%
10f.) Policy frameworks to help guide decision making.	40.7%	48.6%	47.0%	40.0%	41.9%	49.4%	48.9%	21.6%	53.6%	45.4%	46.7%	45.7%
10g.) Case studies outlining what others have done to assess and prepare for climate change impacts.	49.1%	51.4%	54.6%	52.2%	44.4%	57.2%	52.5%	28.4%	59.6%	55.6%	60.0%	53.3%
10h.) Government-wide policy that directs Ministries to prepare for climate change impacts.	52.8%	55.1%	46.4%	48.9%	44.4%	57.2%	50.4%	31.1%	54.0%	54.4%	66.7%	52.0%

11.) Are you familiar with the BC Government's Climate Change Adaptation Strategy?	Administrative Support	Applied Leadership	Business and Strategic Leaders	Enforcement & Corrections	Finance & Economics	Health, Education & Social Wor	Information Technology	Legal Counsel	Science & Technical Officers	Senior Administration & Research	Trades & Operations	Total
	(n=605)	(n=140)	(n=388)	(n=180)	(n=119)	(n=444)	(n=145)	(n=74)	(n=435)	(n=436)	(n=15)	(n=2981)
Yes	4.0%	15.2%	23.2%	5.6%	7.7%	7.6%	8.5%	10.8%	34.4%	15.1%	13.3%	14.3%
No	96.0%	84.8%	76.8%	94.4%	92.3%	92.4%	91.5%	89.2%	65.6%	84.9%	86.7%	85.7%

12.) Are you familiar with the "Climate Change 101" courses offered by the PSA?	Administrative Support	Applied Leadership	Business and Strategic Leaders	Enforcement & Corrections	Finance & Economics	Health, Education & Social Wor	Information Technology	Legal Counsel	Science & Technical Officers	Senior Administration & Research	Trades & Operations	Total
	(n=605)	(n=140)	(n=388)	(n=180)	(n=119)	(n=444)	(n=145)	(n=74)	(n=435)	(n=436)	(n=15)	(n=2981)
Yes	5.1%	8.7%	17.9%	3.4%	8.5%	5.7%	10.6%	6.8%	19.6%	13.7%	13.3%	10.8%
No	94.9%	91.3%	82.1%	96.6%	91.5%	94.3%	89.4%	93.2%	80.4%	86.3%	86.7%	89.2%

Results by Region

Please indicate the level of threat (i.e. negative impact) each event could present to your business area.	Northern BC	South Coast	Southern Interior	Vancouver Island	BC Public Service Average
	(n=360)	(n=778)	(n=408)	(n=1403)	(n=2981)
	% Small or Large Threat				
2a.) A heavy rainfall event that causes localized flooding	83.9%	76.0%	79.2%	63.6%	71.7%
2b.) Persistent droughts during summer months	75.3%	55.4%	76.2%	50.5%	63.7%
2c.) Increase in sea level	39.7%	58.5%	30.6%	55.2%	66.6%
2d.) Accelerated coastal erosion	39.2%	51.8%	28.2%	50.5%	66.5%
2e.) Increased variability in stream flow and seasonal transitions, including earlier spring run off	79.2%	52.6%	71.8%	45.3%	59.7%
2f.) Increasing river temperatures	62.2%	45.0%	58.1%	37.5%	67.1%
2g.) Intense heat waves	78.3%	64.3%	80.9%	57.9%	59.2%
2h.) A particularly mild winter	65.6%	39.2%	61.3%	33.2%	64.3%
2i.) Increased frequency and severity of forest fires	88.3%	62.7%	86.8%	59.5%	68.7%
2j.) Shifts in species abundance and distribution	64.4%	43.4%	55.1%	41.1%	64.5%
2k.) Increased outbreaks of new and old pests	76.9%	56.9%	70.3%	51.2%	64.0%
2l.) Receding and thinning of glaciers	55.6%	45.6%	49.0%	37.6%	66.4%

Computed from 2a-l	Northern BC	South Coast	Southern Interior	Vancouver Island	BC Public Service Average
	(n=360)	(n=778)	(n=408)	(n=1403)	(n=2981)
Don't know any threats from list	1.4%	1.5%	2.3%	3.7%	2.8%
No threats from list	5.6%	6.6%	12.5%	19.5%	14.1%
At least one threat from list	68.6%	73.8%	62.5%	56.0%	61.9%
All 12 threats from list	24.4%	18.1%	22.8%	20.7%	21.3%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

8.) Over the past 12 months, has your business area been affected by any weather-related events?	Northern BC	South Coast	Southern Interior	Vancouver Island	BC Public Service Average
	(n=360)	(n=778)	(n=408)	(n=1403)	(n=2981)
Yes	53.1%	26.9%	39.7%	22.7%	30.0%
No	37.8%	57.3%	47.1%	61.4%	55.4%
Don't know	9.2%	15.8%	13.2%	15.9%	14.6%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

8b.) How significant was the impact of this weather-related event to your business are?	Northern BC	South Coast	Southern Interior	Vancouver Island	BC Public Service Average
	(n=360)	(n=778)	(n=408)	(n=1403)	(n=2981)
Not at all significant	.0%	1.9%	2.5%	4.1%	2.4%
A little significant	12.6%	21.0%	18.5%	22.2%	18.9%
Somewhat significant	28.3%	39.0%	34.6%	36.7%	35.4%
Significant	27.7%	24.3%	25.9%	21.8%	24.2%
Very significant	29.8%	11.4%	16.7%	13.6%	17.2%
Don't know	1.6%	2.4%	1.9%	1.6%	1.9%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**